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No. 2543.—VOL. LIV.

LONDON, SATURDAY, MAY 17, 1884.

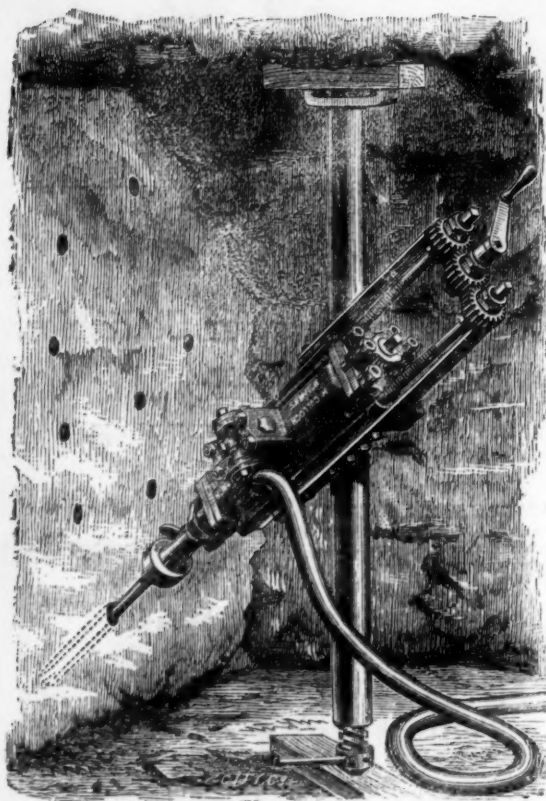
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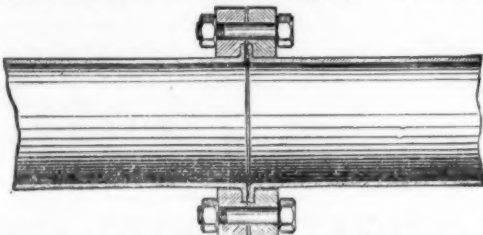
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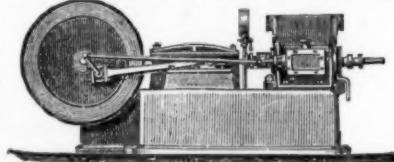
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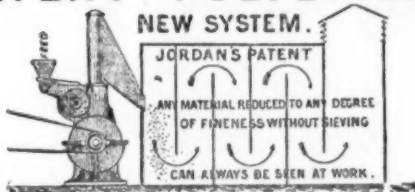
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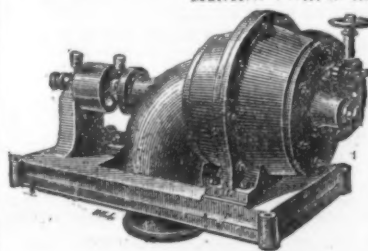
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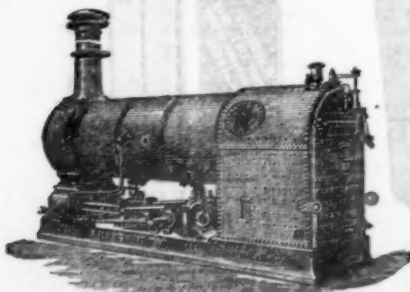
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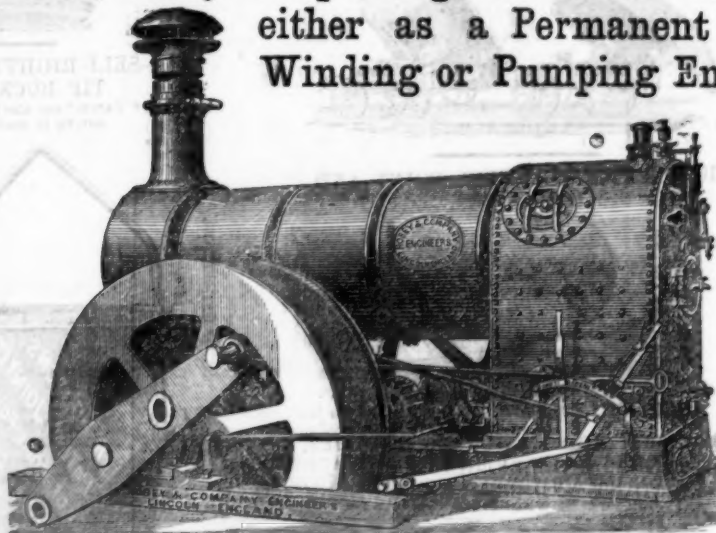


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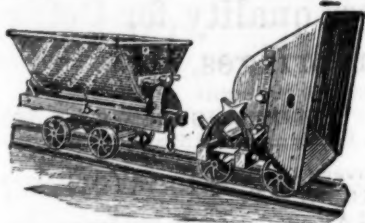
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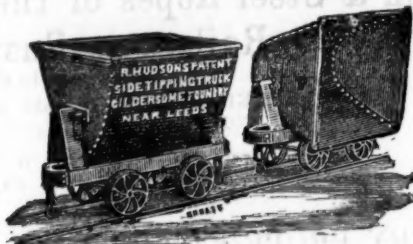
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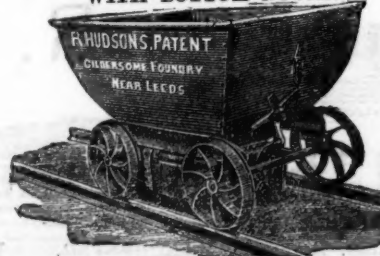
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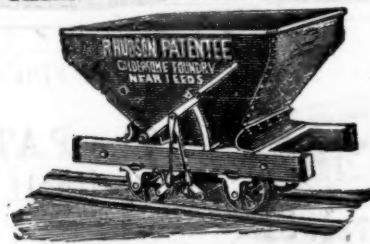
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13.—PATENT STEEL HOPPER WAGON.



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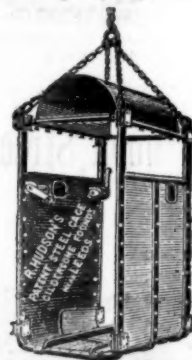
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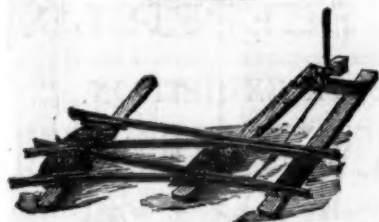
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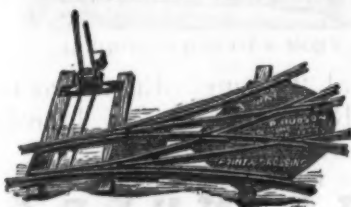
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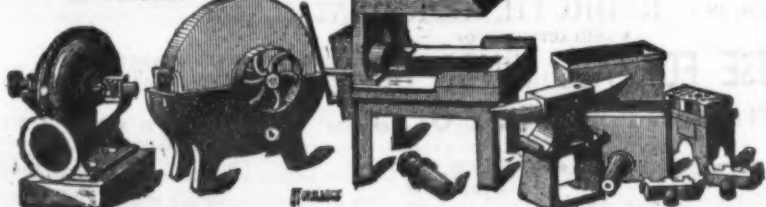
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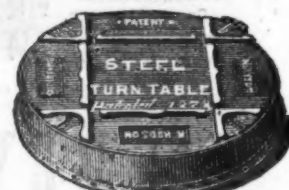
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There cannot be a doubt that in the 17th century these mines had a reputation all over Europe, and attracted many strangers as speculators. There is evidence that the Inner Austrian Court Chamber communicated with the Head Surveyor, Lucas Fitzinger, explaining to him that His Highness, the Archduke Ferdinand of Austria, had very graciously received the idea for the purchase of the Putzian Mountain lots in Goldschee and Ladefing, and expressed a wish that the Prince elect of Cologne should send his Court Assayer, David Hörmann, to negotiate for these mines in Upper Carinthia. The Archduke further suggested that as it was a somewhat risky and speculative business for a foreign potentate to go into so extensive a mining property, and have so much under his control, he would name as Commissioner's Councillor Geo. Wagen at Hagensburg, as well as Hartmann Zinsol, Matthias Klingeisen, Judge of the Mines at Zegring, and Sigmund Kager, Judge of the Mines in Grosskirchheim, together with the Head Surveyor, who would act, and were to inspect the Putzian lots and mines, assay the ores, and make contracts with the Putzians and their creditors, and, in fine, to arrive at a decision for and on account of His Highness the Prince. A son of Mechior Putz, of the same name as the father, applied for the office, and was made Master of the Mint in the year 1607.

With regard to the taxes (soccage and exchange) which the mine owners were obliged to pay, we find in Ployer the following:—"Of quartz and glass ores the 10th cwt., and of gold crushings the 10th cwt., were given for soccage." With every Judge of Mines there was a separate soccage officer appointed, who took over the soccage ore from the works, and made all calculations respecting them, afterwards sending them forward to Ober-Vellach to the Head Surveyor's office, where they were smelted at a soccage furnace built for the purpose. In these times the works were soccage free until they had yielded at least 3000 casks of gold wash or 200 cwt. of dust ore, and on such ores as did not produce above 1 oz. of silver per hundred-weight no soccage was levied.

On Nov. 20, 1578, the Head Surveyor of Mines wrote to Wolfgang Grünwald, Judge of Mines at Steinfeld, that Abraham Zott and Co. would hand over all their ores as redemption money if 5s. per ounce of silver were paid them; but it appears that subsequent to this the redemption price of the mines was so regulated that it rose and fell according to the production. The owners were in most cases willing to leave the estimate of it to the Judge of Mines. In the Carinthian States mining was also much assisted by a system of loans. The administration of the internal affairs of the province was carried on by those alone connected with it, formed into a perpetual committee, and all surplus taxes over and above the amounts paid to princes, or for the armory, in defence of the State, or the expenses of Government, were employed in making advances by way of loans to mine owners. Very large profits were also made by the Carinthian States Mint, which in the year 1580 coined bullion worth 304,795 fls., which consisted of 700 marks of gold and 2000 marks of silver, the gold mark being worth 366 fls. 51 kreutzers, and the silver mark 24 fls. The not insignificant gain arising to the Mint placed the States in a position to negotiate more extensive loans with different mining bodies, who in consequence of the then prosperous state of mining were enabled soon to repay the amounts advanced to them by a continuous delivery of refined gold and silver. Putz Brothers were also borrowers, receiving in some cases yearly and in others quarterly loans of amounts of 2000 fls., and there is also recorded that one Hans Weitmoser obtained a loan of 1500 fls. on account of his silver production at Ober-Vellach, &c. It is recorded, however, that in 1580 Georg Krieglstein, at Steinfeld, lost 3342 fls. during the year in mining, and was, therefore, unable to repay an advance made to him; henceforward it was agreed that advances should only be made to those who could give security on their unencumbered property for the amount advanced. In the year 1595 Putz Brothers were unable to cover the amounts lent them by deliveries to the Mint of gold and silver on account of the unproductiveness of the mine and of the failure of their hopes; and, therefore, their creditors were obliged to proceed to execution. As the profits of the Mint diminished the mining firms became impoverished, and the property in which they had previously invested capital (as they said) in the States was advertised for sale. The Turkish wars continued uninterrupted from the year 1592, until the unhappy siege of Canisa in the year 1601 necessitated a constant drain on the country of men, money, and provisions, which were sent into Croatia territory, and consequently exhausted the State Treasury, and consequently loans to mining adventurers were no longer to be thought of.

A sudden end appears to have been put to the mining industry in Upper Carinthia at the end of the 16th century or the beginning of the 17th century; the religious persecutions of this period causing the capitalists and the miners to abandon their mines and emigrate elsewhere. I now here introduce the remarks of Ployer on the religious condition of that period, and the decline of the mining industry in consequence:—

The doctrine preached by Luther was adopted generally by the inhabitants of Carinthia and Steinmark (the districts only of Windau excepted), the freethinking mountaineers especially early adopting the reformed religion. An Evangelical Ministry was established in Klagenfurt, and all pastors who desired appointments for the cure of souls were required to present themselves for examination. But as theological doubts and religious disputes have invariably been proved to be the parents of denominations and sects, it is not surprising that with Luther's doctrine, another called the Manichaean, or what is now recently called the Flacian Sect, crept in unobserved, and to this form of belief not merely laymen but many clergy adhered.

On Dec. 9, 1578, the Head Surveyor wrote to Hans Preininger, the Judge of Mines at Schlading, informing him that the Styrian States were pressing to get him dismissed from office because he was attached to the Manichaean doctrine, and reminding him that the Diet of Brucker had rejected all these sects except the Augsburg Confession which was declared the only true and pure Christian doctrine; from this it is clear that even the Head Surveyor must have been Evangelical in his ideas. A short time before Dec. 5, 1578, the Judge of Mines at Steinfeld, Wolfgang Grünwald, enquired of the Head Surveyor whether they ought to send for examination in Klagenfurt, in virtue of the Brucker Diet, the preacher they had selected under the previous Head Surveyor, George Singer; the Head Surveyor on Dec. 6 gave as his answer to the whole commune of Steinfeld that they must send their preacher to Klagenfurt for examination, especially so that it may be ascertained whether he is attached to the Manichaean-Flacian doctrine, by which wide-spreading error so many virtuous minds were being seduced.

On June 6, 1581, the firms, managers, servants, and the whole company of miners, commissioners, heads of committees, and the whole community at Steinfeld (as is shown by the signatures) lodged a complaint that, at the examination at Klagenfurt, their preacher, Veit Heinprecht, who had had the cure of souls for 15 years, had been arrested for erroneous doctrine on some points regarding the

"nature of original sin." At the same time this error must have been largely propagated, for on June 24, 1583, the Head Surveyor, in a letter to the Judge of Mines at Steinfeld, expresses surprise that some Steinfeld firms should desire the appointment of a preacher of the Flacian Sect, especially as, after having preached three trial sermons, the church had been closed by the Sheriff of the country. He, therefore, advises that the preacher should, according to regulation, be presented to the Klagenfurt Minister for examination, after which he, the Head Surveyor, would do his best to have him appointed in accordance with the wish of the people of Steinfeld; but this preacher must have been immediately convicted of Manichaeism, because the Head Surveyor, on Sept. 13, 1583, sent to the Steinfelders an original ordinance of the Carinthian Parliament, in which the removal of the Flacian preacher and a prohibition of the prevailing error was enacted; at the same time there was recommended to the Steinfelders a preacher named John Laurentius, who had been at Mantern and Kreutberg, and had good testimonials to show from the minister at Klagenfurt. As the ferment increased so grew the hatred of the co-religionists, so much so that they avoided all communication one with another, and quarrelled and argued over mere trifles.

When on Nov. 24, 1583, the order was issued to all Judges of Mines that they should in future be guided by the Gregorian calendar, and found their calculations thereon, the preachers persuaded them not to accept that order (which was mistaken for a command of the Pope) but to stand by the ancient calendar, whereupon the Head Surveyor on March 10, 1584, complained of the Steinfelders because their preacher advised them to hold by the ancient, and not by the new calendar, and to celebrate Easter in accordance with the former, modestly adding that this was not an order of the Pope, but of the King, and therefore a temporal ordinance, and that the Church was not edified, and much less kept in peace by such senseless quarrels, he therefore recommends them obedience. But the mineowners and communes do not appear to have been satisfied with their preachers, and several complaints were handed in which had reference partly to their worldly transactions and partly to religion. Among the justifications is one from pastor Josef Pangelias, issued, he said, as a "justification," and which was read by him on July 10, and had reference to a complaint brought against him by the firm of Gendorf before the Head Surveyor, and from this document an idea may be formed of the amount of superstition that prevailed at this time; the pastor makes a proposal—probably *pro captivitate benevolentia*—that he would kindly remind them of the day and the hour of the birth of his youngest son, and then he would fix his nativity with God's help for the offer of his insignificant services. Meanwhile, the Catholic clergy did not look quietly on, but tried to assert their rights and stem the current of reform, or as they said stop the spread of damning heresy. With this intention Hans Jacob, Archbishop of Salzburg, lodged a complaint before the Archduke Charles on Oct. 20, 1579, to the effect that Melchior Putz, a large mine adventurer at Grosskirchheim, had appointed a preacher, and that the Judge of Mines, Sebastian Birger, who had come from Schlading, and could neither read nor write, protected this preacher, and had en joined all the miners and others who had to do with mines that they should separate themselves from the Catholic Church and doctrine, and should worship instead at the new preaching-house of Putz, and listen to the Sectarian preacher.

The Archduke Charles, on Dec. 10 of the same year, ordered Christoff Goldauf, Archpriest at Gemund, Hans Huebmayer, Head Surveyor, and several of the Ortenburg officers at Grosskirchheim, to examine into the matter in common, and to present their report on the subject to him. By the powerful co-operation of George Stobacius, then Bishop of Levant, who wrote the well-known epistle, "De resecandis funditis haereticorum religionis," to the Archduke, and whom his panegyrist called "In extirpandis haereticis adiutorem fidelissimum, Ferdinandum et premendae sine mora Reformationis auctorem," but who was certainly from all appearances possessed of far more holy zeal than political sagacity; the Catholic clergy at last succeeded in inducing the Court to rescind the Brucker national conventions, and in the beginning of the year 1600 an edict appeared by which all those Evangelically disposed, or who did not declare themselves Catholics within three months, and receive the sacraments from their ordinary priests were commanded to quit the country. In virtue of this order the Steinfelders appear to have been the first to leave their native land, for on June 22, 1600, all the officials of Steinfeld resigned for reason that they could not consent to renounce the Evangelical religion. With what politeness and decorum they did this may be seen from the following written resignation which they sent in to the Head Surveyor, Hans Huebmayer:—"To the Councillor, and Head Surveyor of His Highness the Archduke Ferdinand of Austria, &c.—Noble Lord and Master.—Our most obedient service is presented to you first, as it ought to be. With regard to the command of His Royal Highness, issued to the officers at Steinfeld on May 2, 1600, to change our religion within a month, we beg to thank you and His Highness that we are to be allowed to retain our offices for so long a time, and although we (the officers) should have wished to be allowed to remain until the end of the year, yet your orders shall not be opposed by such of us as have given our adhesion to the Augsburg Confession, which we cannot with a good conscience renounce, and if we may not retain our offices till the termination of the year we intend most obediently to quit them at once. On the other hand we (the officers) beg that you will order to be paid to us our stipends for this half-year, the amount of which we already owe for necessities of life, and in this hope we remain your obedient servants, Blasius Eribeck, Judge of Mines; Hans Waldner, Inspector of Mines; Wolfgang Prandner, Clerk of Mines; Jacob Kranabeter, Soccager." This Blasius Eribeck, Judge of Mines, whose name appears at the foot of this document, was formerly Judge of Mines at Gastein, in the district of Salzburg, but was expelled from the country, and from the service on account of the reformed religion he had embraced, but was accepted in the same year as Judge of Mines at Steinfeld.

On the receipt of this resignation the Head Surveyor sent Blasius Eribeck the following testimonial, with his passport, and this document does honour to the merits of the Judge of Mines, while at the same time it illustrates the modesty and good nature of the Head Surveyor:—"I, John Huebmayer, Councillor of His Highness the Archduke of Austria, and, by favour of the same, Head Surveyor of Mines in the hereditary principalities and lands, make known that under the above date Blasius Eribeck, who up to the 17th year of our office was Judge of Mines, declares that he cannot forsake the religion of the Augsburg Confession, embraced 55 years ago, with an upright conscience, he was intending in obedience to the decree of His Highness to avail himself of the permission to retire. I, therefore, send to the aforesaid Blasius Eribeck a dismissal and passport in due form, and declare at the same time that during the 17 years that he held office under me he has always discharged his duties as an honest, upright, and honourable man, and only because he cannot conscientiously embrace the Roman Catholic religion he is superseded in his office; and my earnest request is that all who can do so should give kindly assistance and service to the aforesaid Blasius Eribeck and to his wife Catherine, and whoever does so I will endeavour to compensate to the best of my ability." In witness thereof I fix my hereditary seal, and have signed with my own hand.

On Sept. 14, 1600, there was issued from the Reformation Commissioners of the Archduke Ferdinand "to all Evangelists," and particularly to George Kreigelstein, the following order:—"That within three months he must without fail go to confession and communion to his ordinary appointed curate, or if not he must under pain of forfeiture of person and property pay the 10th penny, and quit the land of His Highness never to return." The order must have been carried out with cruel severity, because from a letter without date, but probably from the contents written a few months later—at the end of the term prescribed—the following persons, Lorenz Pfeuter, Peter Trebesinger, at Weissbrach, George Ranch, of Rading, and other villages of Weissbrach, brought the Judge of Mines, Urban Sager, at Steinfeld, that he would obtain for them from the Commissioners who had ordered them to quit the country under pain of life and property within 14 days a longer term so that they might not, as they said, be turned out into the fields with their wives and little children in the midst of a severe winter.

At the end of October, 1600, probably at the same time as the above order was sent to these different people, the religious Commissioners came personally, accompanied with armed men, to Klagenfurt; but in consequence of a letter from Hans Amtman to Hans Huebmayer, the Head Surveyor, dated Nov. 3, 1600, were not admitted by the people, and were compelled to encamp on the Saafeld, and withdraw from thence to St. Veit with the Bishop of Libnitz, who accompanied the Commissioners. Hans Amtman wrote "the inhabitants are quite willing to treat if he (the Bishop) would come without armed men and make known to them the commands of the Prince; the Bishop, however, did not so come. The whole of the inhabitants were summoned, when they unanimously declared that they would not depart from the Augsburg confession, even should it cause them the loss of their lives and their property. Failing to meet the Bishop this declaration was shown to the captain general.

I find I am unable to finish this historical account this week; but must again trespass on your space. I referred last week to an old book printed in 1741. I have since then seen a much older one, entitled—*Pyrotechnical Discourses*, being the grounds of Pyrotechnical Metallurgy and Metallic Assaying (?). By John Christian Fritschius, of Schwartzburg, faithfully translated from the Latin, and useful for all such as are in any ways concerned in Medicine of Metals. Written in 1699, and printed and sold by B. Bragg, in Ave Mary-lane, London, A.D. 1705. From this book I extract the following as showing the gold washing process as then understood and carried out:—"The ores are all pounded commonly, being moistened by sprinkling of water on them to prevent them being so easily scattered, especially such which also want washing to the end that the most earthy part of them, being now finely beaten in pieces in the form of thick troubled mud, may be separated by a stream of water more largely admitted for this purpose carried away, when for this end there is contrived a particular structure of the channels which carry off the water that runneth down from the pestles that it is beat with, so that several windings, nay holes, being interposed, the matter in its passage by the agitation or motion of the pestles, and the great fluctuating of the water occasioned thereby, which is still more and more driven on or beaten off, may partly leave its heaviest metallic parts in these holes, and by a larger circumference at the bottom of these channels the finer, stony, earthy, lighter substance being also subtilised by the pounding flowing further on may pass off. As to the more precious metal which is at the same time in a less quantity, it being intermixed with much sand and gross mud, like so many small grains or little leaves in the consistence, as it were, of dust. The washing is either performed simply by manual operation in "einen und mulde," or in a trough which they call "einen sicher trog oder sicker trog," or else in wooden vessels fitted up expressly for the purpose, so that by placing of it somewhat sloping the sand and the mud by the fluctuating motion of the water which is always poured on it may be washed away and carried off; but the heavier metallic kind of sand or pure little pieces of metal by their own weight, always tending to the bottom, and no way yielding to the gentle impulse of the water which floweth upon it, may so remain there. This washing is chiefly made use of in gold when any fragments of it appear in the rivers, or when any small pieces of it stick in such kind of mud or flat clay or gold seiffer, "oder seiffen erden." This latter is undertaken or performed with great profit in the territories of the famous and most illustrious Earls of Schwartzburg, near the town of Schwartz, in a river of the same name, which abounds with gold, so that truly there is no doubt but the gold which is found in the River Sala is brought thither from the same river, yet in less quantity and in lesser fragments, which is still an argument that it roll'd or passed thither from the aforesaid river. Since this kind of gold is very subtle they are wont to make use of pieces of cloth or silk, which are spread and fastened for some space to that washing bench which they sometimes call "wasch-banet," but more commonly "plan-herd," as also those cloths are called "planen," for the gold, tho' very small, sinking down by its natural weight, stick in the nap of these cloths, or in their small pores, and by the shaking of the cloth readily falls down, especially if it be shaken again into another water. The whole of the skill of that washing which is performed with the bare hand, and in a trough, consisteth in a dextrous stirring, shakin', or jogging of it; so that the sand being thus something raised in the water which is put to it may give way for the heavier metal to fall to the bottom, which is well affected by the jogging of the trough, thus the metal being once got to the bottom all the sand which lieth upon it is the more easily washed off, as also by the fluctuating motion of the water, it being jog'd often, the metal easily goeth to the bottom, but the grosser parts contained in it, as stones and flints, by the shaking of the trough only once or twice, are easily taken up by the hand without any fear of taking away any little pieces of metal with them, since these by timely subsiding tend downwards amongst the flints and grosser sands. In great operations of this kind there are always at hand certain sieves whose bottoms are made of a proportion'd brass wire, and their holes made proportional. By the means of these the smaller particles of sand are, as it were, in a instant separated from the smaller stones and flints, for the small fragments of gold presently pass thro' these little holes, it being a very rare thing to find a piece as large as a grain of wheat, or half as thick; whence these pieces of gold which was taken out of the River Schwartz, and which the most illustrious Count of Rodolphsburg keeps by him, being about the bigness of a little bean tho' not so thick, is esteemed as a rare and curious jewel, and which was taken out of a gold fish which had swallow'd it in this our river which abounds with this kind of fishes." F. KENSINGTON.

Preston, May 12.

NORWEGIAN GOLD MINING PROSPECT.

SIR.—As the opinion of one who has had 35 years' experience in gold and silver mining in Australia, California, Mexico, New Zealand, and South Africa with regard to the recent gold discoveries made here will be of interest to the readers of the *Mining Journal* I subjoin some account of the present and future prospects of this locality. I am a resident and slightly interested in some of the mining locations here, but will give you a truthful report to the best of my knowledge. I believe you have had something in the way of a report from the owners of the Oscar Mining Company with regard to their mines, but I have not yet received a copy of the *Mining Journal* containing it. I will not attempt to give you any description of the geological formation of the island, as it is to all appearance much the same as the surrounding coast, and has been often described by others much better able to supply you on that point. Belts of slates traversing rocks of granite in different forms more or less mixed up with quartz veins cutting in every direction, and containing copper, lead, and iron sulphurets, also silver and gold, and I expect several other metals when tested; also a considerable quantity of lime in sulphurets and carbonates, more or less mixed with the quartz. Gold has been found in payable quantities in four places, so far nearly north and south of each other, but not in the same line quite. South in a mine (which like most of the other places was taken up for copper), named the Harald Haafager, is a large well defined quartz reef 8 ft. thick, but not being worked at the present time; this property is owned by Mr. J. Jonassens, of Haugesund; 16 miles south of here the gold in all these claims is what we call in California free gold, mostly in the quartz, also running in calcspar in the slate. Fine gold can be obtained by washing with the dish all along these reefs, and in the little streams running from them down to the sea the gold is very difficult to catch, being fine and very ragged in shape, like feathers when seen under a powerful glass, but mostly solid in the quartz as large as pennyweight pieces. The next claim is the Haugesund, a strong quartz vein, showing gold along the surface quartz for 200 ft., and good gold at the deepest place (only 12 ft. as yet), but work is being pushed along as quick as the limited means of the shareholders will admit of. Mr. Jonassens holds the greater part of this claim also. There is lots of quartz in this mine that will pay well; but at present, like most of the Australian reefs at shallow depths, the gold is not mixed all through the quartz, but found in rich specimens, and will require close watching, to prevent them going astray amongst the rubbish or the pockets of the workmen, but that will change when they get deeper. The next is the Oscar, nearly due north. This was the first mine located, nearly three years ago. Gold

was found after working a long time for copper. This mine did not take a start until lately, when it was bought by a London company, and under the management of Mr. Murchison and Messrs. Daw, sen, and jun., is making up for lost time. They are erecting buildings, and have a fine road nearly finished down to the sea, and expect to have their 20 stamp mill going this summer I believe on very rich rock. The next claim is north-west from the Oscar. This claim is being worked by the Oscar Company, but is the subject of dispute between them and Mr. Jonassens, who owns the greater part of the same vein further north of the disputed part, and have got a large body of quartz, showing free gold, mixed with galena and iron sulphurets, no copper. This promises I think to be a valuable property. The Government surveyor will be here on June 12, and then the disputed part of this claim will be decided, but the Tinredalen must get the same run of gold now working in the disputed part, as all the gold here dips to the north, as is common in Australia and elsewhere.

I do not advise strangers to come here, as everything is against their chance of taking up ground. The law here is in favour of monopoly to a large extent. Each claim is 150 fms. long, and no limit to the number of claims to each individual; so that those who were here secured all likely looking places at about 2s. per claim expense in the first case, and after the first year about 10s. more. The land is all owned by private people, so that it is not much of a place to come prospecting, and as plenty of good miners are obtainable at 2s. 6d. per day I think we shall see quartz reefs worked and paying dividends on lower grade rock than in any other part of the world, but I expect to see some very rich quartz worked here also.

On the whole, I must say I think the prospect of a good paying mining camp is beyond all doubt, and I see no reason that gold should not be found in the surrounding islands if sought for. The reason it has not been found long ago is that all the veins in this country contain so much copper pyrites that look so much like gold to those not experienced in gold mining that they cannot distinguish the difference, but they will soon learn now, and I expect to hear of new discoveries elsewhere. Every man about here is the owner of one or more localities that they call mines, but when you visit them there is not a pick been put in the ground, and nothing to indicate the existence of any reef except iron pyrites; they are everywhere to be found. Capital to work must be obtained from England, France, or Christiana, and this no doubt will be forthcoming as soon as the claims get down, and show they have as good prospects below as they have on the surface.

I visited this island a year ago, and found gold in several places, and should have remained, but was prevented by other mining engagements in California. There were only a few fishermen and their families here then. Some of them have sheep and cows, and farm the land under great difficulty, carrying the manure up the steep hills in baskets, and bring their crop down in the same way. The house accommodation is very scanty at present to accommodate so many visitors and the employees, but there are a dozen houses in the course of erection, and there will be accommodation for all in time. We have two small steamers calling twice a week. Fish is dearer here than in London, because the inhabitants are too busy to catch fish at present about here, but all this will be got over in time. They do not understand a sudden rush as they used to do in Australia, where new towns sprang up with thousands of inhabitants in a week, with stores, butchers, bakers, &c., in full swing. I think there are likely to be alluvial diggings that will pay when prospected, but the soil is very scant, and will soon be worked out, and there is the land owner to be consulted before starting. I will call on you on my return to London in about six weeks' time, and show you a fine collection of gold specimens that are hard to beat in any country.

Bommel Island, May 5.

JOSEPH BADDELEY.

QUEENSLAND GOLD FIELDS—SENSATIONAL YIELD.

Gympie, March 21: Telegram: Another Sensational Crushing.—Nos. 3 and 4 Glanville crushed 350 tons of stone for 460 ozs. gold. The Wilmot Extended crushed 470 tons of stone for 10,944 ozs. gold. Dividend not yet declared; probably be 11s. per share.

SIR.—In drawing your attention to the above telegram, I would point out that this rich mine belongs to a few fortunate Brisbane people. The bulk of the gold mines at Gympie, as a rule, are owned by local people, and Brisbane seldom gets a slice of luck such as this, which is, by nearly 100 per cent., the richest single crushing ever known in Gympie, or in all Australia either; and it is only a few weeks since the lucky owners had another one of about half the amount. The gold face of the reef looks as rich as ever. Two years ago, when Indian gold mines (so called) were all the rage in England, this Wilmot extended at Gympie might have been bought for a mere song. Gympie is in the famous Wide Bay and Burnett district of Queensland, which district also contains the rich copper and gold mines of Mount Perry and Boolbomda, now connected by rail with the seaport and a coal district as well; and when more progress has been made in treating mixed ores scientifically these lodes of mixed copper and gold will attract more attention than at present.

The remark of the Gympie Miner that the week ended March 21 would be a red letter day in the annals of Gympie mining will, without doubt, meet with general consent, seeing that during it two of the most sensational crushings which have been recorded since the opening of the field have been finished, and considerably over 1 ton of gold has been the result of the two. The first was the Ellen Harkins, which gave the extraordinary return of nearly 63 ozs. to the ton for a parcel of 71 tons, which had been raised from a depth of nearly 600 ft.; the second is the crushing from the Wilmot Extended, which has returned a grand total of 10,944 ozs. of retorted gold for 470 tons, or an average of over 23 ozs. to the ton. The astonishing nature of these yields induced us to hunt up the mining statistics of the other Australian colonies, in order to institute a comparison between the apparent capacity of this field and that of other and more vaunted mining centres. From the manner in which these returns are compiled we find, however, it is impossible, with one exception, to contrast crushing with crushing as we first intended; yields for a given time only are stated. At the head of the list stands the Morning Star p.c., Woods Point, which obtained 40,000l. worth of gold for eight days' crushing only, the number of tons of stones crushed, however, is not supplied; second is Khorhman's Company, Hill End, giving for the year 1873, 24,079 ozs. 8 dwts., or a money value of 93,616l. 11s. 9d., from 436 tons 9 cwt.; third stands Beyer's and Holtermann's Mine, also at Hill End, which in 1873 yielded 16,279 ozs., the money value of which was 63,234l. 12s., from 315 tons. The past history of Gympie will compare very favourably even with those extraordinary returns, as instance the following:—New Zealand, p.c., from February, 1870, to February, 1871, gave 17,490 ozs.; second, 7 and 8 Monkland, from the end of July, 1872, to May 24, 1873, gave 17,140 ozs., and to show the richness of the surface local patches we can cite the California, July 30, 1870, 10 tons, 998 ozs.; Dodd's Reef, first crushing in 1870, 10 tons, 1100 ozs.; Lady Mary (Brown and Lord's claim), 7 cwt., 1358 ozs. To come, however, to quite recent dates, we find No. 1 North Phoenix returned from March, 1882, to March, 1883, 17,331 ozs., or money value 61,823l. 2s. 5d.; the Ellen Harkins, from the first discovery of gold about six weeks back to date, 70 tons 19 cwt., 4468 ozs. 2 dwts. 12 grs., and last the Wilmot Extended, which shows for the last three months a total of 15,489 ozs., for 701 tons of stone crushed, or an average of over 22 ozs. These figures speak for themselves, and require no further comment.

Yet this appears to be only the beginning of the permanent prosperity of the camp, for every week brings news of fresh developments in it. Other fields, always excepting Charters Towers, are apparently lost sight of in the immense yields continually being reported from Gympie. The Ellen Harkins and Wilmot Extended Mines have been in friendly contention for the largest yields and averages. But the honours now rest with the latter, as they have declared a dividend almost unparalleled in the history of Australian mining, and surpassing the aggregate of three dividends declared by one of the Phoenix companies at Gympie. The crushing from the Ellen Harkins Mine gave a splendid return, 71 tons of stone having yielded 4558 ozs. retorted gold. The directors subsequently declared a dividend of 11s. per share. This average has not been surpassed by the Wilmot Extended, although the bulk of gold and the dividend just declared by the latter are greatly in excess. It must, however, be borne in mind that the whole of the Ellen Harkins

stuff has been obtained in sinking the shaft a depth of about 20 ft. The reef in the bottom of the shaft still contains an excellent show of gold, and the country adjacent is of a fine slate. Sinking is still being continued. It is probable, however, that a start will shortly be made to open out north and south upon the rich stone, so that in a very short time another sensational crushing may be looked for, as a much larger number of hands can then be employed in breaking the reef.

The Wilmot Extended cleaned up after their crushing of 470 tons for 10,944 ozs. gold. The directors of the company were enabled to declare a dividend of 36,000l. Up to the present four crushings have been taken from the mine. The first of these—161 tons 6 cwt.—was finished in the second week of September last, and gave a return of 1400 ozs. 5 dwts. 12 grs., upon which a dividend of 2s. 6d. per share, or 4500l. was declared; the second was finished in December—185 tons, giving 1248 ozs. 12 dwts. 6 grs., with a dividend of 2s. per share, or 3600l.; the third Jan. 11 of this year—231 tons 12 cwt.—yielding 4549 ozs. 12 dwts. 6 grs., and giving a dividend of 8s. per share, or 14,400l.; the fourth on Tuesday last, yielding 10,944 ozs. 4 dwts., and giving a dividend of 11s. per share, or 36,000l. It will thus be seen that the total quantity of stone crushed from the mine up to date is 1047 tons 18 cwt.; the return of gold, 18,142 ozs. 14 dwts., or an average of over 17 ozs. to the ton; and of the dividends, 58,500l. The whole of this has been accomplished from one level, which has been worked only about 300 ft. along the line of the reef. All the faces in the mine are looking favourable for heavy yields, and fresh lots of specimens are being daily taken out. The scrip of both of these mines is changing hands at premium prices. A good return has resulted from a crushing of 153 tons of stone extended from the Lucknow Extended Mine, the average yield per ton being 9 ozs. A dividend of 2s. 3d. per share was declared, equal to 4050l. A three weeks' crushing from Nos. 2 and 3 Smithfield gave an average yield of over 1 oz. of gold per ton, which, with the large body of crushing staff there is to operate upon, may be considered a satisfactory yield. As a proof that the Phoenix Mines are sustaining their reputations, it may be noted that the Phoenix prospectors had 550 ozs. of gold from 640 tons. No. 1 North Phoenix cleaned up early in the month for 687 ozs. of gold from 807 tons. No. 1 South New Zealand, Sultan Extended, and one or two other mines are being narrowly watched in expectation of something good shortly turning up. The aggregate yields for February reached 4401 ozs. gold from 3864 tons, or an average of 1 oz. 2 dwts. 18 grs. per ton. No. 1 North Phoenix headed the list with 1388 ozs., from 1607 tons, but the phenomenal yield of the month was in the No. 1 South Wilmot, which from 57 tons stone obtained 1249 ozs. of gold.

At Charters Towers the average has been maintained, chiefly through the splendid yielding qualities of the Day Dawn p.c. The average for the field during January exceeded that of Gympie; the average was 1 oz. 4 dwts. 16 grs. per ton, 4091 tons having yielded 5048 ozs. gold. During the month elapsed since last summary the Day Dawn p.c. cleaned up twice. They crushed 260 tons for 868 ozs. gold, and again 280 tons for 969 ozs.; two shilling dividends have been declared. New machinery has been put up, and larger returns are expected. The Queen Block and No. 2 Queen have been attracting attention; the latter cleaned up, after three weeks' crushing, for 1016 ozs. gold. The Queen No. 2 south-west cleaned up for 1065 ozs., and is still crushing. Several new mines are being talked of, but very little is heard of their doing.

In his report upon the Gympie gold field Warden Lukin, in his report to the Under Secretary for Mines (March 8), says:—This gold field, since the alluvial deposits were exhausted, never produced so much gold as it is doing now. The area over which payable mines are being worked is gradually expanding, whilst the old mines are continuing to give good returns. During the past month 2614 tons of quartz have been crushed for 7602 ozs. of gold, from which dividends amounting to 22,020l. have been paid. The Gympie mill has not been crushing during the month, it having been hung up to undergo the usual annual overhaul; but for this the yield would have probably been 10,000 ozs., as there are large quantities of stone at grass waiting for the stampers. It has now recommenced work with an additional 10 stamps, making in all 50, to be increased shortly to 60. I am glad to have to report that the prospects of the Deep Lead alluvial mines have improved, the Prospect claim having got into wash-dirt that will, if it proves continuous, pay handsome dividends.

Large and very rich specimens have been exhibited during the month from the Lucknow Prospect Claim, Wilmot Extended, No. 1 South Wilmot, and Ellen Harkins, those from the last-mentioned being exceptionally promising as to the future of the mine. The reef, which has been followed down on the underlie, is 4 ft. in thickness of solid stone. The specimens were taken from the 570 ft. level. The company consists of 27,000 shares, all of which, with the exception of 2000, are held in Gympie, and mostly by working men. As I write, another batch of specimens are, I see, being lodged in the bank. The discovery is of immense importance to the field, as the Ellen Harkins claim is considerably to the west of any claim that ever yielded heavy gold. The probability is that the intervening ground will also prove rich at deep levels; the value of all mines in that locality have accordingly greatly improved.

The grand crushing of the Wilmot Extended—within a trifle of 20 ozs. to the ton for 231 tons—has, of course, received wide publicity. The Lucknow p.c. threatens to rival the Wilmot in turning out heavy patches, the last breaking down having been exceedingly rich. The No. 3 North Phoenix Company have completed their steam winding plant at a cost of over 2000l. They commenced bailing this week. With the large body of stone in their mine they should, when in full work, make considerable addition to their monthly returns if they can get all the stone they can raise crushed. I subjoin a list of crushings for January:—

Claims or Lease.	Tons.	Ozs.
Collected from mullock heaps.....	68	24
No. 2 North Lady Mary.....	52	81
Phoenix p.c.....	620	664
North Glanville.....	148	96
Nos. 3 and 4 North Glanville.....	316	235
No. 1 North Phoenix.....	766	704
Wilmot Extended.....	231	4549
North Glanville.....	139	235
Glanville p.c.....	246	132
No. 1 South Wilmot.....	28	882
Total	2614	7602

Average per ton, 2 ozs. 18 dwts. 4 grs.

In his report upon the Charters Towers gold field, Warden Sellheim (March 12) reports:—There has been a large deficiency in the quantity of the stone operated on, as I expected, but the yield has been very satisfactory. You will see by the returns that 3391 tons of quartz yielded 6679 ozs. 8 dwts. 3 grs. of gold, giving the handsome average of 1 oz. 19 dwts. 9 gr. During the month the wet season has fairly set in, and copious, but at the same time not excessive rains have done an immense amount of good to the whole district. There is abundance of grass now, and the watercourses are fairly filled. Still more will be required before the advent of winter to make the ensuing season a fairly good one. As usual during this season the water that has to be lifted in several mines has been abnormally heavy, on account of influx from the surface; but, on the whole, there has been very little to complain of, even on this account. The mine put to most inconvenience through water is the Hope, at Millchester, who have their lower levels full of water, as unfortunately they were right in the middle of laying down a new double road down their underlie, and until this task is completed all bailing is put a stop to. This being one of our largest mines the output of stone is, of course, considerably diminished. This also applies to the Day Dawn, where the full complement of men will not be put on until the large mill in connection with this mine is completed. There have been, however, four large and very satisfactory crushings during the month—from the Queen No. 2, S.W., the Queen No. 6, N.E., the Day Dawn Block and Wyndham, and the Day Dawn, beside six others, where the quantity of stone crushed exceeds 100 tons.

If the present weather continue for any time, the sluicers on the

Upper Cape should have a good time of it. I have had no reliable account from there of late, but shall be able to inform you shortly, as in consequence of payable gold having been reported to me at Johnson's Gully, I shall have to pay a visit to Cape River whenever my duties here will permit me. The specimens of mundic I have seen from there look very promising, and several numbers have been applied for on this new line of reef. The return of crushing shows that 3391 tons yielded 6679 ozs. 8 dwts. 3 grs. of gold, or an average of 1 oz. 19 dwts. 9 grs. to the ton.

I need scarcely direct attention to the exceedingly gratifying character of the above details, especially as regards Gympie. For an immense body of quartz (nearly 500 tons) to yield nearly 24 ozs. of gold to the ton all round is, indeed, a thing unknown outside of Gympie.—Brisbane, March 26. N. BARTLEY.

BRITISH ENTERPRISE IN VENEZUELA.

SIR.—In your able article under this head it is asked—Does the non-success of the Venezuelan gold mining ventures having their origin in London arise from the system of English administration? I answer unhesitatingly—Yes. Take as an example a company in Guayana, which was started in London some two years since, with a large nominal capital; one-half of this was to be paid to the vendors, although only one-fourth was to go to the owners. One-sixth of the capital was subscribed by the public, and this was so applied that only 5000l. (one-twentieth of the working capital estimated for) has been available for the purchase of machinery and for working the property, the remainder passing into the hands of the vendors, brokers, directors, and others interested. Of course no gold has been yet produced, no dividend declared, and indeed for more than 18 months no accounts have been rendered to or meeting called of the real shareholders; indeed these latter cannot even ascertain if they have any title to the mine. If other Venezuelan mines started in England are conducted on the same principle, I quite agree with you that investors will not only lose 75 to 80 per cent. of investment, but I think will lose them altogether. VICTORINE.

W ST AFRICAN GOLD FIELDS.

SIR.—Greatly surprised no doubt the shareholders in the above company have been at receiving a circular from the directors in which they are told that at the general meeting it was announced that a judgment against the company had been signed for 420l., and that consequently the company was in danger of having its property and assets sold unless the judgment could be satisfied. Now, Sir, as very few of the shareholders were present at the meeting, would it not have been well if the directors had put all this in their report? but neither in that or in any account of the proceedings at the meeting, is any mention made of it. And yet the subscribers are told they were informed of it. I am afraid if this is not absolutely false it is a suppression of the truth. But then if it had been told who would have subscribed? So policy suggested silence.

On a slip of paper sent with the circular we are told that the minor effects of the company (what, I wonder, are they?) have been sold and realised the sum of 60l., which will go towards payment of the liabilities. Still, for all that, we are asked to subscribe more capital. So, Mr. Editor, here is a company possessing a mine which is unprotected and not paid for, and with debts besides, with its machinery sold, and all work at an end, and yet the directors ask us to "subscribe at once sufficient to pay off all debts, and to raise a further sum for exigencies until the success of one or two of the other companies on the Coast, now believed to be on the eve of fulfilment should give such an impetus as would enable the directors to raise sufficient capital, &c."

Surely the directors might have told us the names of the companies so shortly expected to be so successful; we might then by taking a few shares, and they are all cheap enough in every Gold Coast Mine now, have been able to retrieve the losses made by investing in this company, but although the directors no doubt fully believe what they say it would not have answered their purpose to have done so. One is somewhat surprised, however, to find the directors, notwithstanding the bright prospect, not offering to take a single share themselves. Surely out of the 1800l. they have, it is said, already received out of the 6000l. subscribed they might well have done so, and, as example is better than precept, their so doing might have been of benefit to the company and to the shareholders. As a further inducement to subscribe additional capital we are offered one fully paid-up share for everyone we take. Thus, as they say "reducing the price of the 2l. share to 1l. each." Will the directors kindly inform us what these 2l. shares are worth, or whether they are worth anything at all? If they are worth nothing, and how under the circumstances can they be worth anything, why attempt to impose upon our ignorance, and make us believe they are worth 2l.?

The directors would do well to explain a matter mentioned by "S. W." in the Mining Journal of April 5. "I have it," says your correspondent, "from the office of the company that the directors had taken up only 700 shares among them, value 1400l., but their qualification was 250 shares each, and as there were seven of them when the advertisement was issued we have 1750 shares representing when paid-up 3500l. due by them to the company. What has become of the 2100l., the difference between payment in full, or 700 shares and 1750 shares? and your correspondent adds—I have written to them for information on this point, but cannot get an answer."

A great deal has been said about the great amount of work done by Commander Cameron at the mine, and the inadequate remuneration he has received. It ought to have been mentioned, he might have done so himself, that he went out not merely to look after the affairs of this company, but also one other at least, for which doubtless he received pay.—Somerton, Norfolk, May 14. B.

TIN MINING—GREAT WHEEL VOR DISTRICT AND THE MINES THEREIN.

SIR.—Readers of the Mining Journal will remember my quoting from the report of the late Capt. Charles Thomas, that he said Great Vor district was the richest for tin in the kingdom. I have no means at present of giving the amounts of profits of all the mines near Great Vor; but Great Vor paid 270,000l., Wheel Metal 100,000l., Great Wheel Fortune, on the south next to Metal, 182,000l.; Great Work, on the west of Polladras Downs, 378,000l.; Polladras Downs some thousands included in Wheel Vor accounts, as I am informed; Leeds and St. Aubyn, a little to the west of Great Work, 56,000l.; Crenver and Wheel Abraham, just to the north of Polladras Downs and Wheel Wallis, 90,000l.; Trueman's, 2000l.; total, over 1,000,000l. paid in dividends by these few mines. There are others that gave profits, but I do not know the amounts. I have, I think, said enough to confirm the above report, and which ought to induce capitalists to invest in the mines named, instead of foreign mines, or in old deep empty shells, where in the majority of the companies formed the capital is lost, whereas in the Great Vor district large profits are comatable. Polrose Mine adjoins Polladras Downs on the north, about 100 fathoms deep; for some months the lode and ground have been disordered by patches of elvan and cross-courses. When once clear of these I am not alone in believing that the mine will become profitably productive. Wheel Singer, on the east, and next to Trueman's on the same lodes, with ample capital, energy, and economical management cannot fail to do well. A small engine is being erected, and like that on Wheel Wallis some years ago and many other mines may be found too small; I hope not.

East of Singer, on the same lodes, are mines formerly known as the Cravets, now New Wheel Vor; the several lodes have been extensively explored to a depth of about 20 fathoms, resulting in large sales of tinstone, and, like Wheel Singer, if energetic management is bestowed on this also, will, I doubt not, prove to be a good mine. North Metal, to the east of Great Vor and Wheel Metal, on the same lodes, is looking well, and I fail to see any reason why it shall not prove to be a rich mine; present appearances point to that end. Wheel Wallis, situated to the east of Penhale, Wheel Vor, having the lodes 6 or 7 of the latter mine, Polladras Downs, and Wheel Gwins traversing this large set, also two or three cross-courses forming a great number of intersections with the east and west

lodes. This mine is only about 40 fathoms deep; some of the lodes have been worked extensively from surface to about 20 fathoms deep, and large sales of tinstone amounting to several thousand pounds worth. Some of the lode stuff was so rich that it was sent to the surface in bags. I am indebted to a very intelligent miner for this information, who worked in the mine; it was his opinion, and so it is my own, that if the ends were extended to the adit level and backs removed the mine would leave a good profit. This remark applies to all the others. When the mine last worked a 10 or 12 in. steam engine was erected; this kept all the water from two or three shafts, and stamped the tin stuff with eight heads of stamps until the lode was cut at the 40, when the increase of water was too much for the engine, and the mine was stopped for, it was said, a short time for the purpose of erecting a larger engine; but as tin was only then at 38l. to 40l. per ton, nothing further was done.

West Vor, formerly Carleen, joins Great Vor on the west, on same lodes, made large returns, is again at work, and will, I think, turn out to be a very good mine. There is not in my opinion the least fear about either of the mines I have named proving largely productive and profitable; those at work should be conducted with more energy; those not at work should be immediately started. All persons interested in mining I have conversed with are of opinion we shall shortly see an improvement in this valuable branch of the industry of the county that tin mines will stand in the front rank with those who have cash to invest. Therefore such well-known mines as I have mentioned could be put to work with every prospect of returning a good interest on the capital employed. I have no interest in either of the properties beyond seeing *bona fide* mining giving work to those requiring it and interest to capitalists on their outlay. Great Vor district and the mines I have named will, I am confident, do this, and the sooner they are got to work with spirit the sooner will my only desire be realised. I am only repeating the opinions of the late Capt. Charles Thomas, Capt. James Pope, Capt. Joseph Prisk, and others—very excellent authorities. HENRY H. HESTER.

Plymouth, May 14.

GREAT WHEAL VOR DISTRICT.

SIR,—The supplement of last week's *Mining Journal* contains some statements relative to the mines forming what is generally designated the "Wheal Vor district." Being conversant with most of the mining districts in Cornwall, and more particularly so with this, permit the following remarks to occupy a space in your next. Wheal Vor ("mine near a road") was at work about 140 years ago, for in 1748 a pumping-engine, the first in Cornwall, was erected there. How long the working was continued after that date I know not; but the late Mr. John Gundry, of Goldsmithy, who resumed the works about the year 1812, erected an engine of about 40-in. cylinder, on the old engine-shaft. After that followed Woolf's engine; then, in 1815, Woolf stamping-engine, Pearce's engine, &c.; but in 1819 owing to his numerous undertakings he unfortunately got into the Bankruptcy Court. At that time the prospects were exceedingly bright; but all his interest was sold to Messrs. Grylls and others, so the good man lost all. Trelawny's and Borlase's engines were afterwards erected, and another steam stamps. The works were prosecuted with such success, that up to the year 1844—when they were abandoned—the profits divided were 272,000l. The company held with Wheal Vor, the following mines—Wheal Vreah, Carleen, Polladras, Penhale, Poldown, Wheal Sitchney, Carnmeal, Wheal Metal, Wheal Gwens, and Polrose, but in the two last they did nothing. The whole area is about 1400 acres, which I surveyed in 1831. Wheal Vor, Wheal Vreah and Carleen are on the main lode, which was nearly as rich as the principal lode is at Dolcoath. I see from my *Journal* that in one month the sampling amounted to 11,000l. Messrs. Crease, of London, took up leases of Wheal Vor, Wheal Vreah, and Wheal Metal in 1851, and in a few years expended 350,000l. in machinery, &c., minus 100,000l. profit from Wheal Metal portion; but the money was extravagantly applied. Not a fathom of depth was added to the previous working. Those mines should not have been reopened, they will never pay.

Polladras Downs with tin at about 35l. per ton was about self-sustaining when abandoned. This is well deserving a reworking. At the time it was suspended (about the year 1834) the returns were about equal to the expenditure. The engine was a 70 in.; stamping-engine about 36-in.; depth about 120 fathoms underadit. The lodes are eight in number—all tin bearing.

Polrose, adjoining Polladras, is stopped and the pumps drawn up. This mine deserves a further prosecution, the Margaret lode (tin) showing good indications, and improving as depth increases. The materials will shortly be sold. It is desirable that a more powerful engine than the 40 now *in situ* should be erected to follow that lode down 100 fathoms. There are stamping-engine and other appliances ready for use on the mine. The present company expended about 15,000l. in sinking the shaft, &c., and had no returns. In 1816 my father and friends took up the sett, and erected a small engine, which enabled them to sink the shaft from a 10 to a 30 fathom level. In a short time 300l. worth of tin ore was raised and sold at Treloweth Smelting-house. The party was too poor to go on far.

Wheal Gwens is a part of Polladras Downs, and should go with Polladras Mine. This has not been worked for 60 years.

Carleen portion of Old Wheal Vor should also be further developed, because it is a shallow mine, having well defined tin-bearing lodes. Capt. Harris is a good miner, and his judgment may be relied on. Wheal Vor Company gave very little attention to this portion of their property; they had so many other mines in hand.

New Great Wheal Vor (firstly called Wheal Vraus, 1822) is in the mineral land of Mrs. Popham. The lease is held by a gentleman in London, but little work has been done under the adit level. The lodes contain tin ore, but not so rich as the agent said they were. He described one lode as better than Dolcoath. A stamping-mill was rented for returning the tin, two miles off; but the produce was small. I have no doubt that in depth riches would be found. The adit is only about 17 fathoms deep.

New Great Wheal Vor (Sithney) belongs, I believe, to the same gentleman. Here some men are driving eastward on Great Wheal Vor lode at the adit level.

North Metal, also in Sithney, has a rotary pumping and stamping engine drawing the water from the bottom (30 fathom) level, where a cross-cut has been driven southward to intersect Wheal Vor main lode. Where the intersection took place the contents was found to be blende. The locality of these three mines (last named) should inspire confidence in their ultimate success. The district is highly stanniferous.—*Truro*, May 13. R. SYMONS.

HOME LEAD MINES.

SIR,—Your correspondents "L. D. R." and "Reciprocity," notwithstanding their difference of opinion, are to be commended for drawing attention to the critical position of the lead mining industry of this country. Beyond question the supply exceeds the demand, and hence it is lead has become a drug on the market, and in the face of such a fact how are we to keep our home lead mines afloat? Protection doubtless would do much to improve the price and stimulate mining at home; but how is that to be done with due regard to British interests? Are not our capitalists the chief producers of imported foreign lead? as justly remarked by "L. D. R.," and in taxing foreign lead we would be simply robbing Peter to pay Paul. There is a class of men, however, who do not seem to move in the matter at all, and to whom British lead mining is of great importance. I refer to mine lords. Capitalists and workmen can shift their money and labour to other countries, and this they are fast doing, simply because capital and labour met with encouragement abroad that is denied them at home. How absurd it is for mine lords to demand as high a royalty when lead sells at 11l. per ton as they did when it sold for 22l. per ton. If they hope to continue to draw revenues from this source they will have to move with the times—reduce their dues accordingly. The royalty of no British mine at the present time should exceed 1-24th, and if the mine lords would save themselves and take a business view of matters they would go further, and arrive at the conclusion to charge dues on profits only.

The lord could protect his interest in this respect by stipulating with mining companies to receive as his interest in this undertaking a given number of fully paid-up preference shares in the company,

and to be also entitled to a seat on the board of directors. This would place the mine lord and capitalist on equal terms, and would tend greatly to the development of our home resources.

Directors and shareholders in lead mines are at their wits' end to devise means to keep their mines going. They are hedging in the workmen by reduction after reduction in his wages, till it has become a question with the unfortunate miner of keeping body and soul together. This cannot last; men will have to emigrate or starve. Again there is no speculation whatever, no new ground is being opened up; the ore in sight is simply being taken away, and thereby reserves are daily decreasing. It is easy to see the end of this; in fact, in a little time few lead mines will be at work in this country, and copper mines are already few, and in sympathy with lead mines are restricting explorations as much as possible. Mine lords awaken ere it is too late, and save yourselves even if you have no regard for the welfare of the country.

I do not believe in legislation to improve our condition in this particular respect without infringing on the rights of property. Parliament, however, can be very useful in passing measures of benefit to the community, if indeed it can find time to perform its proper functions. "Reciprocity's" reference to the great benefit to the nation that would doubtless result from Local Option is quite in harmony with my views.—*Middlesborough*, May 13. JUSTICIA.

HOME MINES TRUST.

SIR,—As you published in last week's *Mining Journal* a letter from "Northwick Oxford" very seriously reflecting on the *bona fides* of this company it is only fair that something should be said on the other side of the question, and as I have been a shareholder almost from the time the company was launched I am perhaps in a position to give "Northwick Oxford" some information of which he is at present apparently ignorant. The company, then, has proved a success from the very commencement, and it is only natural that it should be so, by spreading its investments over a large number of progressive and already proved English mines, and by judiciously utilising capital in the purchase of shares at depressed values, it must as a matter of course enjoy facilities which no private individual, however large his means, could possibly do. The result of the directors' operations has enabled them up to the present to pay the following respectable dividends:—15 per cent. twice, 20 per cent., and yesterday, notwithstanding the fearful amount of depression existing in nearly all mining securities during the past year, a fourth dividend of 10 per cent. The original shareholders have thus received more than a third of the cost of their shares in dividends; and, in addition, it must also be borne in mind that the directors during the very first year of this company's operations were able to pay off all preliminary expenses and establish a reserve fund, which has been largely added to every year since, and it now stands at some thousands of pounds.

"Northwick Oxford" ridicules the idea that the directors propose to deal with the reserve in buying debenture stocks and other non-speculative investments. Surely the intention is obvious enough to any man of ordinary common sense. The idea is to continually add to the fund till it equals the entire capital of the company—250,000l.—and it will then be distributed amongst the shareholders, whilst the original capital will remain intact to carry on the operations, for which it was subscribed.

"Northwick Oxford" asks for numerous particulars as to the names and prices paid for the company's investments, which he must know would not be made public merely for his gratification. He also makes a great point as to a balance-sheet. Allow me to inform him that a balance-sheet was issued, and fully discussed at the meeting in March, 1883; but, as the actual financial year of the company ends in September, and it was owing to an irregularity that the accounts were presented in March last year, to put matters straight, the issue of the balance sheet will, I am informed, be delayed till the month named. In reply to "Northwick Oxford's" last question, no one supposes that an eel bears any resemblance to a salmon; but it would not, I think, require a very great stretch of the imagination to fancy that in some respects "Northwick Oxford" resembles the voracious and mischievous shark. R.

Manchester, May 15.

THE PRICE OF LEAD.

SIR,—I have no wish to criticise "L. D. R." unpleasantly, but I am astonished that "L. D. R." does not see that there is great cause why the price of lead should be so unremunerative. The obvious cause is that our Government permits foreign lead to be sent duty free into England, where it is sold to a large profit at prices less than the cost of raising home lead. Surely this cause is very plain and obvious. As I before said "L. D. R." is quite right in saying that a rise in the price of lead would be anything but disastrous. It would be a blessing to thousands, and in my opinion lead should never be lower than 20l. per ton. But no permanent rise and no considerable rise can ever occur until a Protective duty is levied upon all imported lead. Suppose the Spanish lead mines are in the hands of English capitalists is that any reason that hundreds and thousands of English miners should be starved or exiled, that these capitalists, who are in fact enemies to their countrymen, may fill their exchequers? As regard lead I have not prophesied before I know. Only a day dreamer can look for a rise in the price of lead under the present system.—*May 10.* RECIPROCITY.

WEST POLBREEN MINE COMPANY.

SIR,—My object in addressing you is (1) to lay before you some information with reference to this company and those who manage it, which it has occurred to me the majority of the shareholders may not be acquainted with; (2) to make some suggestions for the better working of the concern for the future, if so resolved; and (3) to ascertain the opinion of my co-shareholders as to the past conduct of those charged with the business of their property, and their feeling as to the representations and suggestions now made. As most of the shareholders are doubtless aware there are 6000 shares in all in this concern. At the date of the last meeting (Feb. 20, 1884) these shares were held by 63 members. The greatest number of shares standing in the name of any one member is 1300, and the smallest number held by any one member is three shares. The Chairman of the company (Mr. John B. Reynolds), the gentleman who periodically praises the concern sky high to us, is in the enviable position of being the fortunate registered holder of only those three shares. It may not perhaps be within the knowledge of the whole of the shareholders that this same Mr. J. B. Reynolds was the principal originator of the company, and was at the beginning of the enterprise the registered holder of no less than at least 3000 shares in the mine. There is no better proof of a man's faith in any undertaking than the stake he has in it, and if we may judge Mr. J. B. Reynolds' faith by this rule (three shares at 15s., which is 45s. in all) the shareholders can scarcely be blamed if they fail to reconcile Mr. J. B. Reynolds' professions with his actions, seeing all the time he was praising up the company with his fair speeches he was actually divesting himself of his shares as fast as he could, until Feb. 20 last he had only three remaining.

What I suggest is that a committee be appointed to examine into the whole conduct of the business of the company and the working of the mine since its formation till the date of last meeting and report. If the concern is sound and any reasonable hope left of their money coming back to them, the shareholders ought to be confirmed in the belief; and if it is rotten, it ought to be condemned at once, stopped and wound-up, and not carried on simply for the benefit of Mr. J. B. Reynolds, his dependents, and relatives. In the event of the shareholders resolving to continue the enterprise, I hold—(1) That a concern of this kind ought to be directed by a gentleman as president, who is not a stock or share broker, and who, therefore, could have no interest in the inflation or depression of the value of the shares, and who is one of the largest investing shareholders. Mr. J. B. Reynolds does not seem to me to possess the proper qualifications. (2) The secretary ought not to be related to or a clerk in the employment of any stock or share broker or dealer. Mr. W. J. Reynolds does not seem to me to be a suitable person for this office. (3) The auditor of the company ought to be an independent accountant of sufficient standing to inspire the confidence of the

whole of the shareholders, and ought not to be a mere clerk in the company's office. Mr. Frederick J. Harvey does not seem to me to possess the necessary qualifications.—4. A rule ought to be made by the shareholders that no business of any importance be adopted at any meeting without first having been set forth in the circular calling such meeting, so as to prevent "a mine being sprung" at any time on the shareholders who do not find it always convenient to be present, such as the ridiculous resolutions to pay 50l. a year for the company's share of Mr. J. B. Reynolds' office rent, the appointment of his son as secretary, and a mere clerk in his office as auditor. We might as well take Mr. J. B. Reynolds' word for everything at once, and not bother with accounts at all. In the circumstances set forth, and independently altogether of the result of the proposed investigation, I submit that the whole of the officials in the London office ought to be dismissed; a new Chairman, secretary, and auditor appointed, and the registered office of the company removed to independent quarters forthwith. JAMES M'EEKEN.

Glasgow, May 12.

REPORT FROM CORNWALL.

May 15.—As a rule there has been little to excite interest in the course of mining affairs during the past few days, and the future appears to occupy a good deal more attention than the present. The coming meetings in East Pool and Dolcoath are not unlikely to have some influence in stirring up mining circles to greater activity, but independently of that prices of shares cannot be expected to show any material improvement until the standards make another move. There are comparatively few who are really interested in mining who have not their hands pretty full, and their capital tolerably well occupied. And the bait so far is not sufficiently tempting to out siders.

And yet the wise investor would find his account in present operations. It is impossible for anyone to scan the reports from week to week in several of our leading and at present non-dividend mines, and not to see what substantial improvement the past few months—even weeks—have made in their condition, and what a certainty they afford of a liberal return at no distant period. We do not say that no advantage is being taken of these facts, but they are certainly far from being thoroughly appreciated. We have rarely known what we may call a more thoroughly hopeful period, so far as the actual conditions of mining operations are concerned; and that is really what it is of most importance we should consider at present.

If these remarks need any qualification it is certainly not as regards West Cornwall. Concerning East Cornwall, however, though there has been no falling off, there are no such decided signs of improvement, and Devonshire just now appears to be rather lagging behind. We say "appears," because we do not imagine there really is any cause why it should do so. There has always been a tendency as regards western mining to run, in favour or the reverse, upon particular districts, and just now Devon seems somewhat overlooked. It is only in the Tavistock field that mining in Devon has any extended life, and even there it is far from being all that it might and should be.

Attention has frequently been called to the large areas of mineral land, not merely in Cornwall but in Devon, that are at the present moment lying practically unworked—spots in which deep mining never had any existence, and the ground has been little more than scratched, as it were. We cannot help thinking that a really capable and powerful organisation, making a thorough examination of these localities might produce very satisfactory results. But the work would have to be done well and systematically.

A new departure in regard to the assessment of the Dolcoath "fine." Dolcoath is partly in Illogan as well as in Camborne, and the overseers of the latter parish do not see why they should have all the trouble and expense of battling against the appeal, especially as it is the union and not the parish that will benefit. So they will get out of it if they can, and we presume leave the assessment committee to do its own work, or rather to carry on the work which it has so unwisely begun. It does seem most absurd to rate not only a man's rent but his purchase-money.

TRADE OF THE TYNE AND WEAR.

May 15.—There is still much depression in Iron Shipbuilding, and this has a very adverse effect on many branches of trade. Large orders have been got by the best locomotive manufacturers, and there is a considerable amount of bridge iron, tank work, &c. in the district. At the works of Sir William Armstrong and Co., Elswick, a very large amount of work is on hand, and an extensive order has now been received there from the Government of Japan for ships of war, artillery, and other warlike material. It is understood that the total value of these orders will reach nearly one million pounds. The demand for best steam coal continues good, and most of the best works in Northumberland are well employed. The shipment of this coal on the north side of the Tyne and the coal and coke at Tyne Dock have been large for the week ending May 10. They amounted to 116,407 tons, against 86,998 tons in the corresponding week of last year—an increase of 29,409 tons. The past week has also been a busy one on the Wear in the coal trade. The collieries are generally at work full time, and there is now every prospect of fair employment for the year, but prices certainly still remain far from satisfactory. The shipments of coal and coke at Seaham Harbour have also attained a very fair average during the past week, and the prospect at present is promising. Light vessels continue to arrive, and the South Hetton Company have several steamers on hand this week. The demand for house coal there is still brisk, but there is not much enquiry for manufacturing coal.

The price received by the colliery owners in this district for the best Wallsend house coals in London has for a long period, as we have often noticed in this letter, given great dissatisfaction, and it was expected that the experiment tried by the Marquis of Londonderry to sell this coal direct to the consumer through his agents would lead to a great improvement; but the example of the Marquis does not appear to have been followed to any serious extent. At the present time it appears that some parties in London propose to establish co-operative societies for the purpose of purchasing coals direct from the coal masters, and then distributing them to consumers in London. The colliery owners here have been invited to join those societies, and it appears to be a favourable opportunity for the solution of a long vexed question. The price of this coal in the London market in bulk, it is well known, is very small when compared with the price paid by consumers. The position of affairs at the Thornley and Ludworth Collieries has not improved. The wages due to the late workmen (about 4000l.) still remains unpaid, and there is a large sum also due for rates. After the stoppage of the works about 150 men were retained at work, in order to keep the pits in working order, and it was arranged to pay these men weekly, but at the end of last week the owners failed to pay these men also. It is intended to effect a sale of the works, if possible, and it is mentioned that Mr. Walter Scott is likely to purchase them. This gentleman some time ago purchased the Trimdon Grange and East Hetton Collieries; and, as the coal trade was at that time in a very depressed state, he secured those valuable works for a comparatively small sum, and since that time the works have been vigorously and successfully carried on. Should he also secure the Thornley Collieries it would be a favourable circumstance for the district, and the works would, no doubt, be carried on successfully, as there is a large quantity of excellent coal of various kinds remaining in the royalty, and also a large and excellent plant on the works.

The demand for coke for sale in the open market continues very great, and the price received is only moderate. The exports of coke have not quite come up to expectations, but an increased demand is expected from Spain consequent on the growth of the iron smelting business in that country. Many of the large best cokemakers, however—Messrs. Straker and Love and others—hold contracts for nearly all their produce, and their works are, therefore, fully employed. The Coble Dene Dock is now approaching completion, and it was fully expected that the opening ceremony would have been performed during the present month by the Prince of Wales. It is now asserted that from some cause the invitation sent to the Prince has not

been accepted, at any rate at the present time, and there is some clamour on 'Change respecting the delay, as merchants and owners are anxious that the dock should be opened. In the present state of the steam coal trade the dock will prove of great advantage to shippers of that coal.

The depression in the Iron Shipbuilding Trade is the most serious reverse the industry of the district has suffered for a long period. On the Tyne one yard is now entirely closed, and others are likely to follow the same course unless an improved demand should occur soon. The Shipping Trade also continues much depressed; although large shipments are made freights are to many points extremely low, some have indeed, we believe, reached a point unprecedented in the trade. It is extremely unfortunate that Mr. Chamberlain's Shipping Bill should have been brought forward at this time, as it has caused very great alarm amongst shipowners, and it has no doubt considerably intensified the depression in the trade. It is, however, now stated that the Bill has been modified to a considerable extent, and other points are to be discussed during the present week, and if an arrangement is effected the Bill is likely to be read a second time on Monday next.

The sudden change in the position of the shipping trade is certainly a most remarkable circumstance. Only a short time ago the profits earned by steamships were enormous, in many cases from 30 to 40 per cent. per annum, and of course at that time the shareholders in steam shipping companies did not look very closely into the costs of management and other working expenses; but a change in this respect will now be accomplished. Some steamers have lost 4000*l.* during the past six months, and naturally the shareholders are alarmed. Great reductions are now being made in wages, salaries, and other items, and it is expected that this will lead to an improved condition of the trade; indeed, in some cases retrenchments have been carried out so far as to enable some vessels which had been worked at a loss to earn a small profit.

The Pig-Iron Trade continues in a very depressed condition so far as price is concerned, but still there are circumstances connected with it which ought to lead to some improvement; stocks are declining, but other circumstances plainly act unfavourably on the pig-iron trade, the reduced local demand for finished iron resulting from the collapse of the shipbuilding trade being the most adverse feature of the trade, which acts directly on the demand for raw iron. No. 3 is now quoted as low as 36*s.* 9*d.*; in certain cases makers still ask 37*s.* Connal's stock is unchanged. As the wages question in this trade has now been settled generally it is expected that some improvement will take place in the demand. The iron and other trades of a kindred kind on the Wear at Sunderland have long been in a very depressed condition, but lately two of the ironworks have been partially restarted which had been closed some time. On the Tees there has been more work also. There is little change in the price of any kind of iron—bars are 5*s.* 5*s.*, angles 4*s.* 15*s.*, and ship-plates 5*s.* With one exception, the steel rail mills have been well employed. It is proposed to convert one of the iron manufacturing works on the Wear into steel-making works, and there is little doubt that this will prove to be good policy, as steel will ultimately be generally used for most purposes instead of iron, including shipbuilding. At Middlesbrough the coal and coke trades show little change, but manufacturing coals are lower in price, being 4*s.* 6*d.* to 4*s.* 9*d.* per ton; coke is 8*s.* 6*d.* to 9*s.* per ton at the ovens.

Considerable additions and extensions have been made lately at the engine and other works of the North-Eastern Railway Company at Darlington, and a considerable number of additional hands will now be employed. The extensive engine works and repairing-shops of this company at Gateshead are also in full employment, and the company have also given out orders for a considerable number of new locomotives to makers in the district.

REPORT FROM LANCASHIRE.

May 15.—The recent sudden burst of warm weather has been such a strong reminder that summer is fast approaching that it has caused buyers to hold back a little in giving out further orders, in the expectation that before long there will be a fall in prices; and on the Manchester coal market business has been only quiet during the past week. At the Manchester Coal Exchange on Tuesday there was very little doing, although so far as quoted rates were concerned there was no very material change; as a rule orders were not allowed to pass if some slight concession could secure them. The falling off in the demand has been chiefly in house-fire coals, which so far have been moving off very well for the time of the year; other classes of fuel are without material change, common round coals continuing only in poor demand for ironmaking and steam purposes, with engine fuel moving off moderately well; but supplies generally quite equal to requirements. Pits are still kept going about four days, and in a few cases five days a week, with comparatively very little of the output being put into stock; and at the pit mouth prices average about as under:—Best Wigan Arley, 9*s.* per ton; inferior sorts and Pemberton Four-feet, 7*s.*; common house-fire coal, 5*s.* 6*d.* to 5*s.* 9*d.*; steam and forge coal, 5*s.* 3*d.* to 5*s.* 6*d.*; burg, 4*s.* 6*d.* to 4*s.* 9*d.*; best slack, 3*s.* 9*d.* to 4*s.*; and ordinary qualities, 3*s.* to 3*s.* 6*d.* per ton.

There is a fair amount of activity in the Shipping Trade, but there is so much coal offering in the market that very low prices have to be taken, 7*s.* per ton being about an average figure for ordinary Lancashire steam coal delivered at the High Level, Liverpool, or the Garston Docks.

The Iron Trade of this district continues without improvement, and prices, although not actually quoted any lower, are weak. Makers, who have deliveries against contracts to keep them going, hold on pretty firmly to late rates, but there is no real strength on the market, and where business has to be sought concessions are made rather than allow orders to pass. For local and district branch of pig-iron delivered equal to Manchester 43*s.* 4*d.* to 45*s.* 6*d.* for forge to 44*s.* and 44*s.* 6*d.* for foundry, less 2*s.*, represent about the average prices, but there is very little being done. In outside brands there is a good deal of underselling, and notwithstanding the stronger tone reported from Glasgow during the past week, Scotch iron is being offered here at 6*d.* to 1*s.* per ton under makers' prices. Hematite continues in very poor demand, with good foundry brands to be bought readily at about 55*s.* 6*d.* to 56*s.* per ton, less 2*s.* per cent., delivered into this district. The shipping season is giving a little more activity to the finished iron trade, but the weight of orders giving out is only small, and with the home trade still very dull, prices continue weak. For good Lancashire and North Staffordshire bars delivered into this district 54*s.* 15*s.* remains the minimum quoted price, but in many cases orders would not be allowed to pass if a slight giving way would secure them, and inferior local brands and North Country iron can be bought readily at 54*s.* 12*s.* 6*d.* per ton delivered here.

The returns issued by the engineering trades' union societies show generally a falling off in activity; the number of men on the books as out of work is increasing, and it is exceptional where trade is returned as good. The chief cause of the falling off in the demand for labour is the depressed condition of the shipbuilding trade; apart from the centres affected by this branch of industry, trade may be said to be fairly steady, and were shipbuilding busy would be good. The returns of the Amalgamated Society of Engineers show an increase, as compared with the previous month, of about 1 per cent. in the number of men in receipt of out of work donation, the average at present being 3*s.* in some and about 4 per cent. in other districts. In the Manchester district the increase has not been quite so great, and throughout Lancashire generally trade would seem to be in a rather better position than in other parts of the country. Locomotive builders and toolmakers are kept busy, and cotton machinists, especially in the Oldham districts, are well supplied with orders. With regard to wages, the only movement in Lancashire is in the Barrow district, where the employers are attempting to enforce a reduction of 10 per cent. on piece work, and 1*s.* per week on the wages of the day-men. The secretary of the Steam-Engine Makers' Society states that he cannot report any more favourable news this month, the branch returns, with very few exceptions, being of a despondent nature. From the centres where stationary engine and millwright work is the chief industry, the re-

ports were of a less encouraging nature, and men were being suspended or discharged. The number of out of work members in receipt of support was not much different as compared with April, being still under 2 per cent., but it was far greater than they cared to see.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

May 15.—The Associated Cannock Chase Collieries are circulating their new lists among customers. The list is as follows:—Deep coal—best selected, 10*s.* per ton; lumps, 9*s.*; kibbles, 8*s.* 6*d.*; spires, 7*s.*; and roughs, 6*s.* Shallow coal—best, 8*s.* 6*d.*; lumps, 7*s.* 6*d.*; kibbles, 6*s.* 6*d.*; nuts, 6*s.*; spires, 6*s.*; steam (in tracks), 5*s.* 6*d.*; rough slack, 5*s.*; fine ditto, 3*s.* 6*d.*; heading ditto, 2*s.* 6*d.*; and best hard, 7*s.* 6*d.* per ton. These quotations are a fall upon the last list, which was issued at the beginning of the year, of 1*s.* per ton in most descriptions, but of only 6*d.* per ton on kibbles, spires, and roughs in the deep seams, and nuts in the shallow seams. The prices for fine and heading slack in the shallow seams show no change on the January list, consequent upon the present large demand, and in actual business the better prices that are now being realised than at the opening of the year. As to house fuels, some concessions will be allowed off the new list to regular customers, in the same manner as the January list was departed from at all the collieries of late. Pig-iron remains tame at 62*s.* 6*d.* to 57*s.* 6*d.* for all-mines, and 40*s.* to 37*s.* 6*d.* for cinder-pigs. A few of the finished ironworks are better engaged this week, but improvement is badly needed in price.

Believing that there is much need for an organisation of millmen, apart from the Iron Trade Wages Board, delegates representing about 20 mills in Wolverhampton, Bilston, Willenhall, Wednesbury, Darlaston, and Tipton, have appointed a committee to form a Millmen's Union. If established the Union will discuss the question of extras on long lengths and 23 w.t., the restriction of the output, the employment of boys before the rolls, the protection of the existing card list of prices, and the question of supporting the Wages Board.

The Mines Drainage Arbitrators propose to make a draft mines drainage award, levying a rate of 3*d.* per ton upon fire-clay and limestone, and 6*d.* per ton upon ironstone, coal, and slack, raised in the Tipton district during the ensuing year. The 24th instant, at Wolverhampton, is the time and place fixed for the consideration of appeals.

Determined opposition to the proposal of the President of the Board of Trade to give additional powers to the railway companies to make further terminal charges will be forthcoming from the South Staffordshire Railway and Canal Freighters' Association. They justly point out that already the present legalised maximum charges are so large that they are driving trade from the Midland to more favoured parts of the country and to the Continent. The Association have recorded their protest against the measure by passing a resolution condemnatory of it, and in order to give further weight to their objections have appointed a deputation to wait upon the President of the Board of Trade.

The Potteries Stipendiary has imposed a fine of 5*l.* and costs upon Mr. Charles Baker, owner of the Church Colliery, Backnall, for neglecting to secure two disused pit shafts at the colliery. The shafts were merely covered by a number of railway sleepers, which could be easily removed.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

May 15.—Since last report there has been no change to notice in the state of the Iron and Steel Trades of either Derbyshire or the West Riding. The make of pig in the Chesterfield district, as well as along the Erewash Valley, has kept up to the average, whilst stocks are by no means heavy. But this may be accounted for by the fact that there are a rather large number of furnaces out of blast. The foundries connected with the furnaces have worked tolerably well of late, there being a considerable output of gas and water pipes, as well as ordinary heavy castings. In lighter material business does not appear to have altered much, and is still comparatively quiet. In malleable iron a steady business is the rule in both heavy and light work.

Complaints are still pretty general in Sheffield as to the slackness of trade, more especially in the lighter departments, although some few cutlery orders have lately been received from America. Armour-plates are as active as ever, but those for ships and boiler purposes are anything but brisk. A good deal of indignation is being expressed at the conduct of some of the German manufacturers, who not only brand their goods as Sheffield made, but forge on them the names of some of our best known manufacturers, and then undersell the Sheffield makers in their own and other markets as well.

The Coal Trade in the Midland field is in anything but a prosperous state, the demand having fallen off for households, whilst prices have also declined. The position of the trade, however, will be clearly seen from the following statement:—

During April the quantity of coal forwarded to London by railway was considerably less than in March, the falling-off having been upwards of 34,000 tons. The decrease was shared generally throughout the Midland field, from which most of the coal is sent. The Midland Railway alone, it may be said, conveyed 29,787 tons less coal in April than in the previous month, whilst the Great Northern took a tolerably fair tonnage from several of the West Riding collieries; but at the same time increasing its traffic from Derbyshire and Nottinghamshire. The company no doubt finds it most advantageous to take from the latter counties, the run being so much shorter than from any of the Yorkshire districts, there not being much difference in the rate considering the difference in the mileage between the two. Singular to say the Great Western showed to the greatest advantage last month, being credited with having carried 18,111 tons more than in March. Most of the coal sent by railway is for house and gas purposes, and the rate will not admit of steam coal being forwarded to any of the docks. It is, however, expected that before long there will be a revision of the railway rates for the conveyance of coal over the leading lines to London, which can only be effected by an amicable and general agreement on the part of the various boards of directors, and with a view of bringing the railway charges nearer to the cost of the carriage of coal by sea. Water carriage must necessarily be the cheapest, and the object of the railway companies will, no doubt, be to make the difference between the two modes as little as they can, and so secure a larger share of the coal traffic which they would do, seeing that a great deal less loss is sustained by breakage in the transit of coal by railway than in its conveyance by sea. Seeing that upwards of five-sevenths of the total good traffic on the railways in the United Kingdom is classed under the head of "minerals," the companies will find it to their advantage to promote in every way they can the increase of the coal traffic, from which they derive the largest amount of their revenue. So far as the carriage of coal to London is concerned, however, the Hull and Barnsley Railway, when completed, will be an active competitor with the railway companies for a good share of the traffic, and by means of screw-steamers from the Humber will also compete with the North of England for the steam coal trade on the Thames with a moderate rate, which is an important item, the railway companies should be able to maintain, and, indeed improve, the position as regards the conveyance of house and gas coal to the Metropolis.

At the present time the Great Northern Company carry coal from the Durham field to London at 0-39 of a penny per ton per mile, but charge 0-50 of a penny from the West Riding. Were the company to charge the lower rate named for the carriage of coal from the Yorkshire pits there would be a great increase in the tonnage of coal sent from them to the Metropolis, and this would cause the Midland, London and North-Western, Great Western, and Great Eastern Companies to reduce their rates from the districts they are connected with. This would cheapen the coal to the consumer, and lessen the quantity of house coal sent to the Metropolis by sea; for even at present there is no reason why it should be 2*s.* a ton higher than the best inland. The colliery owners sending by railway to London, it is said, are about endeavouring to obtain a truck or train rate instead of the existing tonnage one, and it is not improbable that this will be granted.

The Home Secretary, it appears, has refused the application made to him for a second enquiry into the cause of the explosion which took place at the Wharfedale Colliery in October last, and the representatives of the Miners' National Union have attacked Mr. Morley, M.P., who was present at the inquest, representing the Home Office. In a circular just issued, and signed by Mr. Crawford, Mr. Foreman, and Mr. Wright, who were present at the inquest as representatives of the Miners' National Union, it is stated that Mr. Morley, "throughout the entire enquiry, seemed more anxious to palliate the shortcomings of the management than to ascertain whether or not inefficient management or gross negligence had not been the cause of the sad catastrophe." To those unbiassed persons who were present at the enquiry it will be needless to state that there is not the slightest foundation for such a charge. To those who were not present at the inquest, we can only say that the enquiry was most searching and conducted with the greatest impartiality, the Miners' Association being represented by Mr. Jones, the barrister.

It was certainly expected that Mr. Crawford and those who were acting with him would call some witnesses to speak as to the state of the mine before and up to the time of the explosion, and it was owing to their not having done so that the enquiry collapsed somewhat suddenly. Now they make charges against Mr. Morley, the manager of the mine, and the two Government Inspectors who were present. The miners' leaders on the occasion of similar catastrophes as that which took place at Wharfedale have petitioned the Home Secretary to send down a person to watch the proceedings in the public interest, as well as in that of the working miners; and now Mr. Crawford and his friends, in return for the courtesy shown by the Home Secretary and his desire that the cause of explosions shall be probed to the lowest depth, turn round and say, "We are more and more convinced that men like Mr. Morley are at those enquiries not only useless, but very often positively injurious, as they tend, as in this instance, to free the Inspector from the responsibility of cross-questioning witnesses." The latter charge is simply childish and absurd. One would like to know what the men now desire at such enquiries after having all they asked for.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

May 15.—Considerable distress and anxiety for the future is felt among the lead miners of the Shropshire lead mining district through the stoppage of work at the Tankerville Great Consoles Mines. On Saturday week, when there was two months' pay owing, the manager was under the disagreeable necessity of announcing that he had no money. With this arrear of pay and the stoppage of credit the miners and their families are on the verge of starvation. There are now only three mines at work in the district—Snailbeach, Roman Gravel, and South Roman Gravel.

In Flintshire the hope that the Talargoch miners would not interfere with the dismantling of the machinery has not been fulfilled, and an extra body of police has been kept in the neighbourhood. Last week some of the men offered to work if the strange men were withdrawn at the getting of the pumps and machinery out of the mine. This was agreed to, but after the strangers were gone only four men came to work, one of whom left immediately. Considerable sympathy is felt in the district for the miners, who are now without the means of getting a livelihood.

The authorities of the New College for North Wales have taken possession of the Penrhyn Arms Hotel, Bangor, as temporary college buildings, and Mr. Ellis Nannau, of Gwynfryn, has given 500*l.* towards the establishment of a scholarship. Could not something be done towards the establishment of science scholarships? Hitherto in the severer studies the Welsh mind has had a tendency towards theology and philology, and it would be better if, along side such studies, there were paid more attention to physical science and its practical applications.

The Hon. Mr. Vivian has been appointed chief manager of the Dinorwic Slate Quarries, in the place of Col. Wyatt, recently deceased. He also succeeds Col. Wyatt as a trustee of the Port of Carnarvon. At the Pant-glas Slate Quarries, near Llanollen, a presentation was made by the men to Mr. Raper, of Lincoln's Inn-fields, of an inkstand carved out of the slate rock and an appreciative address. This is one of the most recently started quarries of this neighbourhood. The Dee Conservancy Bill, which was intended to make the river a continuous dock, has been rejected by the Lord's Committee. It is admitted on all sides that some such scheme is desirable, but that this one was defective in several important points. It was incidentally stated in evidence that the Connah's Quay Railway puts 500 tons a week on the river at the port of that name.

The Shropshire Union Canal Company, whose canal enters the Mersey at Ellesmere Port, have been opposing the Manchester Ship Canal, on the ground that it would affect the access to their system. In reading the evidence of the opposing engineers the impression is forced upon one that the river Mersey is different from all rivers in this world or any other, and that the ordinary laws affecting estuaries in general have no relation whatever to that of the Mersey. Possibly they are proving too much. The collieries are working well, but there is a total absence of enterprise. A fatal accident occurred at Golewen Colliery last week, when Llewelyn Jones was killed by the fall of a stone down the pit. The sale is announced of an important sett quarry near Nevin, which is an instance of that decadence of the trade in paving sets, which has hitherto been an important industry in North Wales. The expenditure on the new waterworks for Liverpool up to the present time amounts to nearly 1,000,000*l.*, and as a good part of the money has been spent in North Wales, it has helped to compensate for the loss of other industries.

TRADE IN SOUTH WALES.

May 15.—The shipments of coal at the South Wales ports for the month of April were as follows:—Cardiff, 577,980 tons foreign and 90,053 coastwise; Newport, 143,164 tons foreign and 84,866 coastwise; Swansea, 86,554 tons foreign and 63,498 tons coastwise; Llanelly, 6231 tons foreign and 12,999 coastwise. The amount sent away from Cardiff last week was 140,563 tons foreign and 21,674 coastwise; Newport, 33,679 tons foreign and 20,964 coastwise; Swansea, 18,919 tons foreign, and about 15,000 coastwise. Small steam coal is in quiet demand, as is also house coal. The Patent Fuel trade maintains its activity. Prices are about the same.

The evidence of Mr. Forster Brown, one of the best mining engineers in South Wales, as given before the Barry Dock Committee of the House of Commons last week, is valuable, as bearing on the unexhausted coal measures of South Wales. In the Swansea district there are 23,000 million tons of unworked coal, which is being drawn up at the rate of three million tons per annum. At the present rate it will take nearly 8000 years to exhaust that supply. When the Rhondda Valley and Swansea Bay Railway is finished, in about two years, the extra supply will be drawn from the Cardiff district. In that district there are about 6100 million tons of unworked steam coal, which is now being raised at the rate of 14 million tons per annum. All this coal is at a moderate distance from the surface. The deeper measures will not be touched until this is exhausted, and will, as a matter of fact, cost more to raise. There are also quantities of bituminous coal in this district, which Mr. Brown did not take into account. In the Newport district there is almost as much coal as in the Cardiff district, but it is of inferior quality. Newport will also draw its supplies of steam coal from the Rhondda Valley in the course of a few weeks by means of the Pontypridd, Caerphilly, and Newport Railway, owned in greater part by Sir George Elliot, M.P. It will thus be seen that, supposing Mr. Forster Brown's figures are correct (and no doubt they are approximately so) the coal supply of South Wales will last for many centuries to come.

The amount of iron shipped in the month of April from Newport was 16,333 tons; Cardiff, 8105. Last week Cardiff sent away 4459 tons, and Newport 2432. Iron ore has arrived at Cardiff to the extent of 13,566 tons from Bilbao, and 1247 from other places; Newport received 11,061 tons from Bilbao, and 1800 from other places. Prices remain low. The Tin-plate Trade remains in an active state, but prices are a shade easier.

AMERICAN MACHINERY FOR ENGLISH COMPANIES.

That the Americans have much upon which to congratulate themselves in the fact that many of the recently formed British mining companies have decided upon adopting American machinery in preference to English for use in foreign mines which they have undertaken to develop is but natural, and if the result be as anticipated, that larger dividends will be earned for the English shareholders, few will complain. The superiority of practical experience as compared with theoretical acquirements in everything that pertains to mining has constantly been urged by most correspondents of the *Mining Journal*, and as America may be regarded as the sole manufacturing country—Australia has not yet reached the position of a manufacturing country—in which practical experience of gold mining machinery has been obtained, it is obviously from America that the best machines of that class must come; but in the majority of the cheap American machinery and instruments it is the imported German and not the home manufactures which have been dispensed with, with the single exception, perhaps, of Waltham watches, which are certainly equal to the best that can be produced in England. In referring to the order given out in America by the Lisbon-Berlyn Transvaal Gold Fields Company, the San Francisco Daily Exchange remarks that in modern and civilised Europe the arts and sciences have been fostered, and flourished to a remarkable degree. The nineteenth century has been prolific in unfathoming the hidden secrets of Nature. Their discoveries and inventions supplied the world, and Englishmen, whose prejudices are proverbial, acknowledge American talent and power, and the superiority of American manufactured goods. Their lands are tilled with American patent improved agricultural implements. They mark time's changes by American Connecticut clocks—utilise American telegraphic and telephonic inventions—are introducing American Pullman Palace cars; American sewing machines are manipulated by the fair hands of Albion's daughters; and last, but not least, they have swallowed the bitter pill of ignoring their own manufactures and mining engineers, and are importing not only American machinery for working their mines, but American experienced miners to handle them. The machinery was manufactured by the Union Foundry to order,

and within 90 days from date of receipt of order it was in England ready for transhipment to their mines in Africa.

Now, so far from ignoring home talent, Englishmen fully recognise the fact that, for high quality and durability, England can at least equal any other country; but they also recognise the importance of obtaining the best possible models, regardless of the place of production and almost regardless of cost. The Daily Exchange claims that their mechanism is superior because, unlike Asia and Europe, America's broad fields and extensive domain give elbow and breathing room to expand. Her pure air and peculiar institutions are incentives to ambition. "Excelsior" is her motto. All are free and equal, with no prejudices of caste, excepting, of course, their inextinguishable hatred of the industrious and thrifty Chinaman; of the fine-formed but woolly-haired nigger, whose skin too strikingly reminds Americans of the blackness of their own hearts and actions; and of the Irishman, who is as difficult to deal with in America as in other countries—no position that cannot be reached by talent and genius. In 1850 America imported, says the same authority, mining machinery from England a very crude, primitive, and old-style quartz-mill, with square stamps and stems, with a crushing capacity of 1000 lbs. to the stamp in 24 hours. From this date inventions and improvements rapidly followed, many of them either the invention, or application of an invention by Mr. Melville Atwood, a pioneer, and one of our earliest quartz miners in Grass Valley. In 1853 the revolving stamp head cam and tappet was introduced, followed by improvements a necessity suggested. It was found that amalgamation and construction as practised by English miners occasioned a great loss of precious metal. Other plans were invented and adopted, again followed by other improvements, until the present nearly perfect system has been reached. Mining being the paramount interest of the State, and to further encourage the important industry, the State Agricultural Society in 1858 awarded the first premium for quartz-mills to the Gold Hill Mill, and the Marysville Express, referring to the award at the time, said:—The Gold Hill Mill, under the charge of Melville Atwood, has long been considered one of the most complete and best regulated mills in the State. This mill has never been in a more flourishing and prosperous condition than at the present time. Besides being the best it is also one of the most extensive in the State, now running its force day

and night. In addition to the premiums above alluded to Mr. Atwood received the medal for the best amalgamator, an invention of his own, for which he does not intend to apply for a patent, but freely offered the fruit of his genius and experience for the good of the public. This amalgamator is generally used throughout the country.

The Atwood amalgamator is still being used in many American mills at date. Since then a great variety of concentrators has been invented and patented, and had their day. At date the Frue and Champion are the favourites. Labour-saving machines, rock-breakers, and self-feeders take the place of manual labour. Hydraulic (water) when practicable is used for a motor. In place of steam, wood, and engineers, stamps of 1000 lbs. each, with a crushing capacity of 3 tons per 24 hours each, replace the old stamp crushing 1 ton in the same time. These improvements, with powerful explosives, power-drills, and wherever practicable handling the ores by gravity, have so far reduced the mining and milling expenses that where the conditions are favourable in vein mining ore in place can be put into bullion at approximately \$1 per ton.

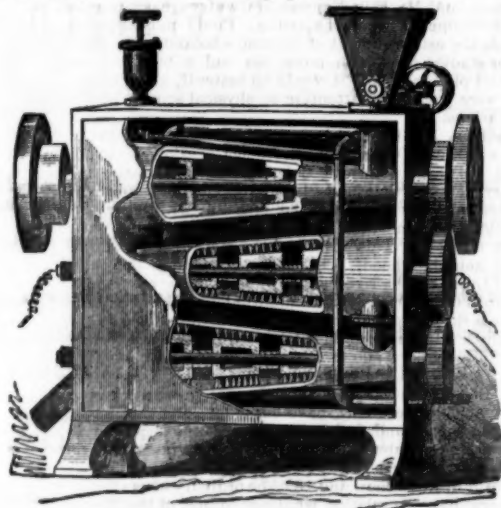
MINERALOGICAL MAGAZINE.—The February number of the Mineralogical Magazine and Journal of the Mineralogical Society has just been issued through Messrs. Simpkin, Marshall, and Co., Stationers' Hall-court. At the last annual meeting the society had a balance of assets over liabilities of 1744. 19s. 1d. The number contains the conclusion of Prof. Heddies' paper on the Geognosy and Mineralogy of Scotland, and Mr. H. A. Mier's paper on the Crystalline Form of Meneglinite, as well as the usual Reviews and Notices. The title-pages, contents, and index to the fifth volume are also given.

HOLLOWAY'S OINTMENT.—Sores, wounds, ulcerations, and other diseases affecting the skin, are capable of speedy amendment by this cooling and healing ointment, which has called forth the loudest praise from persons who had suffered for years from bad legs, abscesses, and chronic ulcers, after every hope of cure had long passed away. None but those who have experienced the soothing effect of this ointment can form an idea of the comfort it bestows by restraining inflammation and allaying pain. Whenever Holloway's ointment has been once used it has established its own worth, and has again been eagerly sought for as the easiest and safest remedy for all skin complaints. In neuralgia, rheumatism, and gout the same application, properly used, gives wonderful relief.

NOVEL ELECTRO METALLURGICAL MACHINE.

PROFESSOR JAMES MANES AND SONS call the attention of miners, mineowners, capitalists, and others interested in the working of gold or silver mines to their new Electro Metallurgical Machine for extracting fine and rusty gold from sands or tailings of stamp mills, or the sands of hydraulic gold diggings, or from the black sands on the coast of Oregon or California, and other parts of the world where gold is found.

The problem that has long troubled the worker of free-milling gold and silver ores is a method to save the mineral now lost in the tailings of stamp mills or flumes. This alone, if it could be saved, would amount to many million dollars profit each year, besides enabling the working of much territory which is now lying idle for want of an economical and thorough process of treatment.



Prof. James Manes and Sons, of Denver, Colorado, U.S., have invented a machine (represented in the above engraving) which it is claimed will save nearly the entire amount of mineral which passes through it, the loss not being over 10 per cent., and in many cases not in excess of half that amount. The machine is a cheap and practical process—it never need stop for charging or cleaning up, being nearly self-acting. Steam, electricity, and mercury are used in the process of extracting the mineral.

This machine or amalgamator is adapted for free-milling gold or silver ores, or refractory after roasting. It consists of a series of three or more large cylinders, wider at one end than the other, placed one above the other in a horizontal position, a shaft or spindle running through the centre of each.

The ore and mercury are fed into the first cylinder, passing into the second, and then to the third. The first cylinder is furnished with steel millers which nearly touch the sides of the cylinder, and revolve at a good rate of speed, mixing the mercury and ore. The second cylinder is furnished with large steel brushes attached to the shaft or spindle, revolving at a high rate of speed; through this a current of electricity is furnished by a Westinghouse dynamic electro machine, which materially assists in gathering the particles of very fine gold together, and thoroughly amalgamating the metal and mercury. The third cylinder is similarly furnished to the second; into this the amalgam passes, and is again acted upon and mixed by the brushes to catch any gold which might have escaped amalgamation in the second. A fourth cylinder may be used if found necessary.

The amalgamated pulp then passes through a revolving copper drum, plated with quicksilver inside. As the drum revolves it takes up the most part of the amalgamated gold. As the inside of the drum is constantly washed with a spray of water from perforated pipes fixed inside of said drum, a clean-plated surface is constantly brought in contact with the pulp or tailings as it passes out from the cylinders. After leaving the drum it falls down on to incline copper plates, the same as is now used in stamp mills.

The amalgam can be collected from the drum and plates without stopping the machine, and any live quicksilver that passes will be caught in syphons. The tailings are carried off with the water. The machine when attached to the flume will be driven by the waste water; it sifts the fine sands from the coarse gravel, and amalgamates it as above.

The specific points claimed by Prof. Manes and Sons in their patent are—
1.—The saving of almost all the mineral passing through the machine.
2.—The loss being less than 10 per cent.
3.—The entire absence of loss of the amalgamated material, thereby saving all the mercury, which, with the processes now in use, there is a large loss both of mercury and the precious metal.

4.—The small cost per ton at which the ore can be treated.
By the addition of the powerful current of electricity that passes off the revolving brushes, the most minute particles of gold will be caught and retained, which in the ordinary flume and stamps passes off with the water; this often amounts to a large percentage.

The inventors state that if English stock companies will give their assistance to work the black sands of Oregon and California by paying for the building of the machines, they will take a share of the gold for their services, or they will send their machines to any part of the world, or will sell patent rights to those desiring any of their patent machines or revolving furnaces for roasting or smelting ores, ball pulverisers, &c.

Prof. James Manes and Sons are agents for the Morey and Sparey Ball Pulveriser, that crushes and pulverises at the same time, and does as much work as eight stamps in a day, crushing either wet or dry.

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For Accountants, Merchants, Public, and Private Offices.

By WILLIAM WETHERED.
This work is applicable to calculations where any number of articles cost is given, and the price of one of such number is required.

The circulation of such a book as this must necessarily be limited. It is doubtful whether it will pay more than the bare cost of publishing, allowing nothing for the enormous amount of labour such a mass of figures has occasioned. The price cannot be named at less than 25s., and it is not too much to say that where it can be applied its cost will be saved in a few weeks. It will be found invaluable to accountants generally.

Copies can now be had, and will be forwarded from the MINING JOURNAL Office on receipt of Post Office Order for the amount.

MR. P. S. HAMILTON (late Chief Commissioner of Mines for the Province of Nova Scotia), PRACTICAL GEOLOGIST, MINING AGENT, and MINING ENGINEER, HALIFAX, NOVA SCOTIA.
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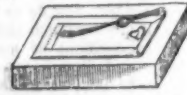
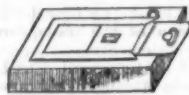


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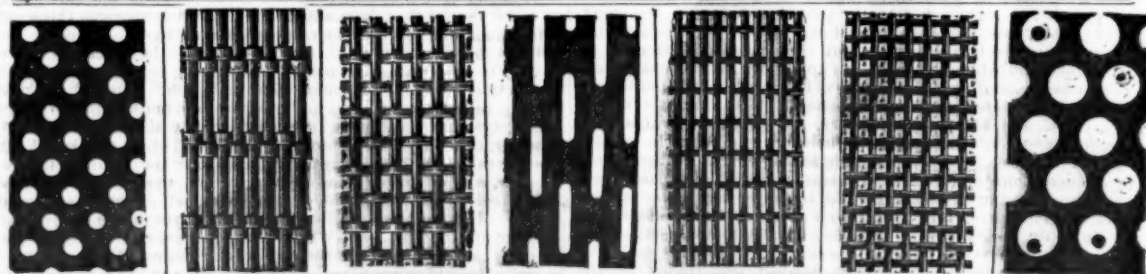
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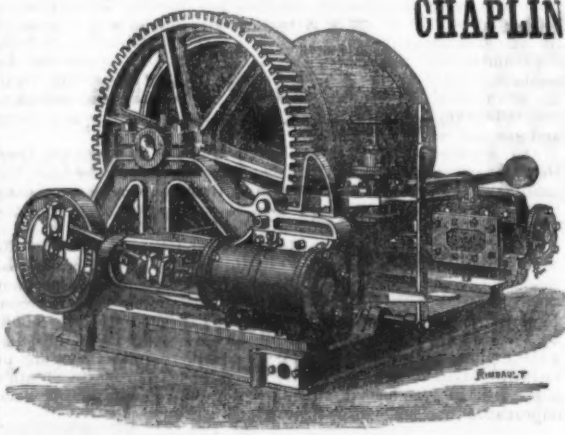
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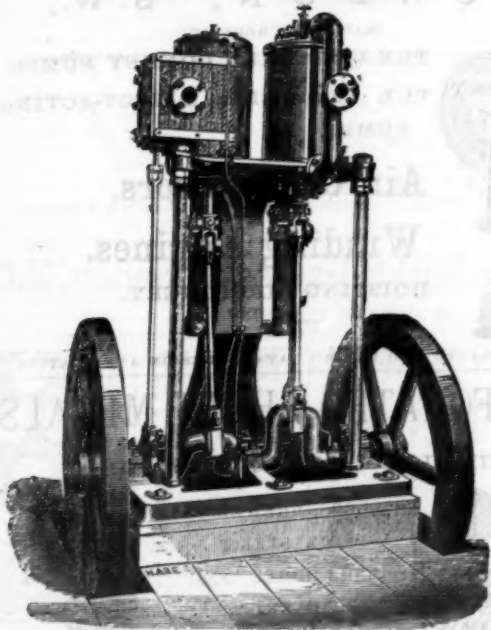
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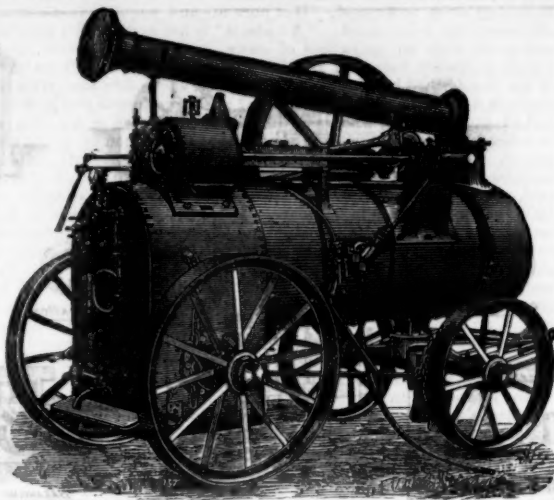
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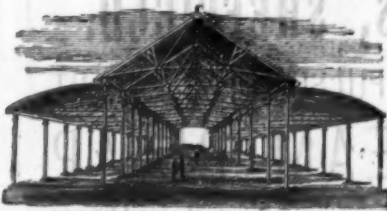
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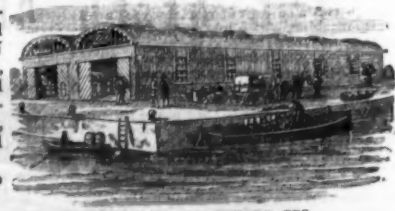
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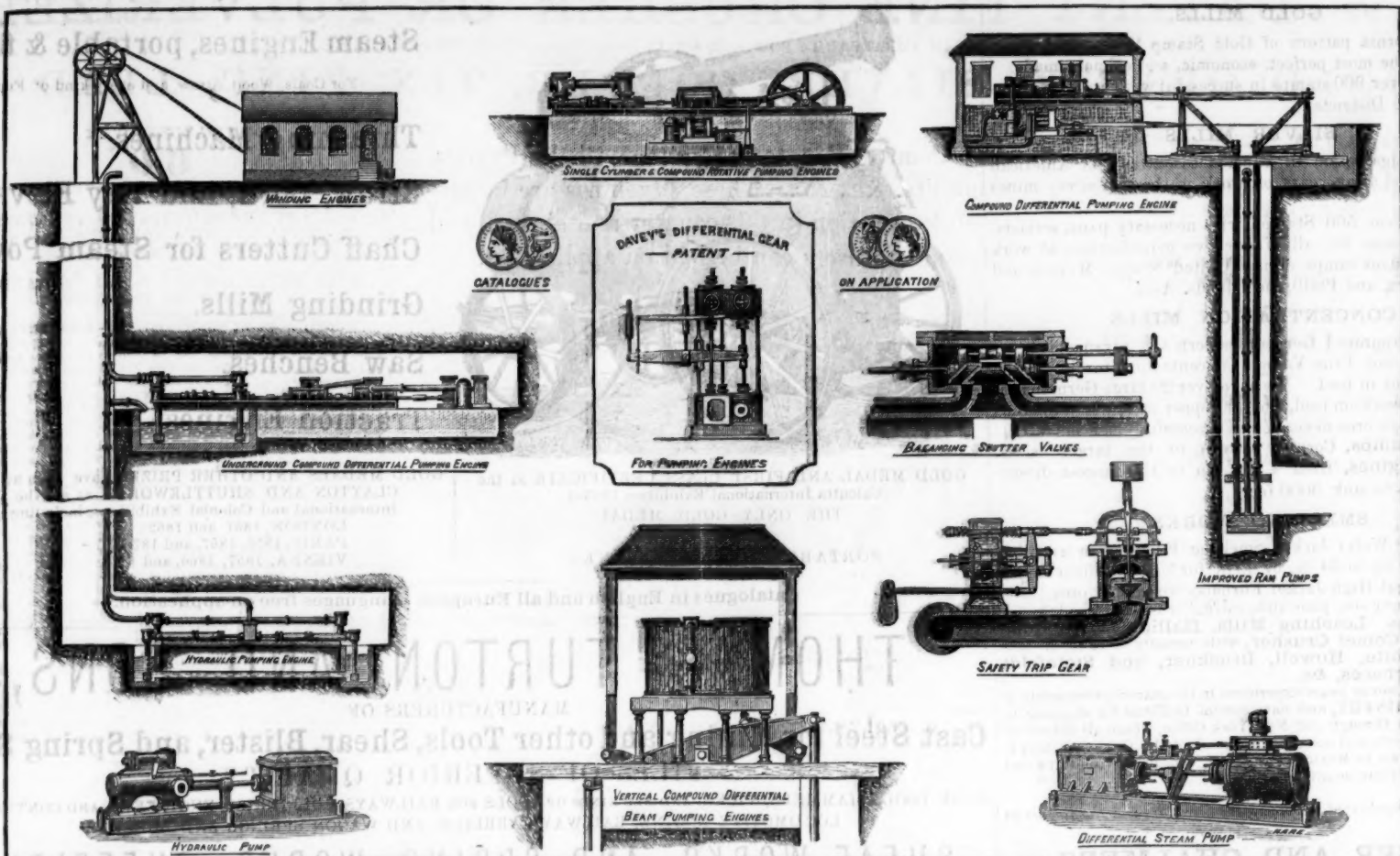
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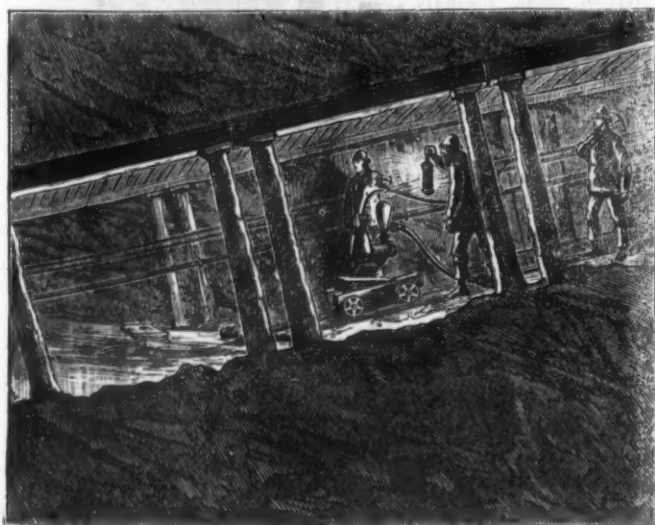
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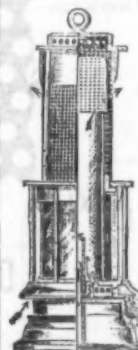
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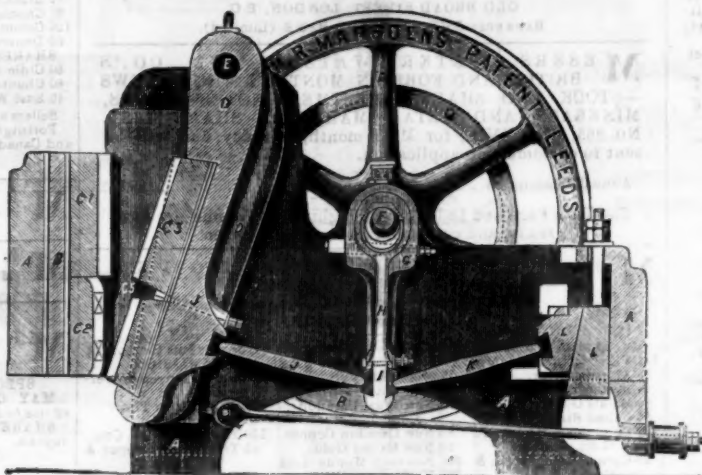
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"The reports from our mines as regards the working of your Fine Crusher (20x5) recently supplied are very favourable, although we cannot quote you exact figures. On being got into position it was tried by hand, with the result that it made short work of the biggest pieces of ore we put into the hopper. You might say how long you would take to deliver another of the same size."

"As I once before stated, your machine is a perfect pulverizer."

"I am sure the machine will be a success, and a great one, and there is any amount of demand for such a machine. We can work it with 20 lbs. of steam, and our engine, which is a 12-h.p., plays with the work, in fact we run the Stonebreaker and the Pulverizer both together with 35 lbs."

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EXTRACTS FROM TESTIMONIALS.—STONEBREAKER.

"I now order Three of your Stone Crushers, size 15 x 10, to be of your very best construction, and to include two extra sets of Jaws and Cheeks for each. The last two 24 x 13 machines you sent me, which are at work in this colony, are doing very well. You will soon find that the railway contractors will adopt your machines in preference to the colonial ones—two of which I have. I know other contractors have had as many as nine of them, which have not given very good satisfaction. Once they know of yours thoroughly, I believe you will do a good trade with the colonies. For reference of the high character of your constructions you can refer to me as having used them with the very best results, both in New Zealand and this colony, and much prefer them to the colonial article, both in point of construction and less liability to go out of order. The material we are crushing is very hard blue stone, for railway ballast purposes. Push on with the order as quickly as possible; I do not think it necessary to have any engineering inspection. I have brought your machines prominently under the notice of all large contractors in this colony, likewise the Government. Many of the contractors have spoken to me in reference to their capabilities, and I could only tell them that they are by far and away the best and most economical I ever used. The very fact of me having purchased now Eleven from you at various intervals and various sizes, and two above 12 years ago, and having tried all the other makers, is sufficient guarantee of the capabilities and the working of your machines. Yours in every way surpass all others."

"Some of your testimonials do not give your machines half their due. I have seen men hammering away on a big rock for a quarter of a day which your machine would reduce to the required size in a quarter of a minute. I would guarantee that your largest size machine would reduce more of the Cornish tin capsels (which is the hardest rock of England) in a day than 200 men, and at 1-25th the cost."

JOHN CAMERON'S

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SPECIALITIES ARE HIS

STEAM PUMPS
FOR
COLLIERY PURPOSES.

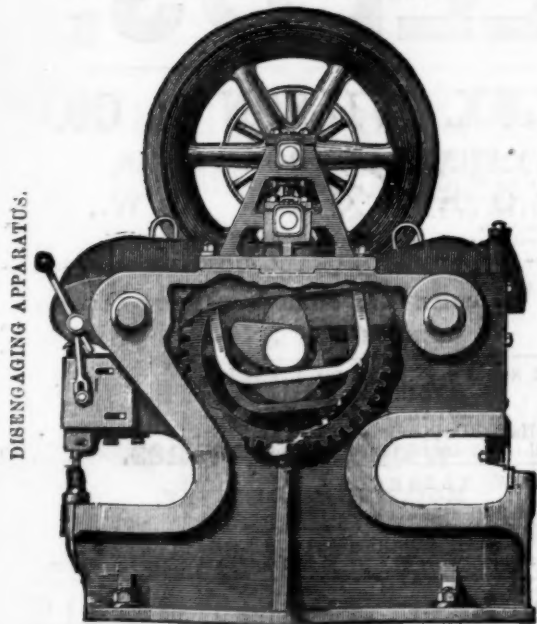
Specially adapted for forcing Water any height

ALSO, FOR

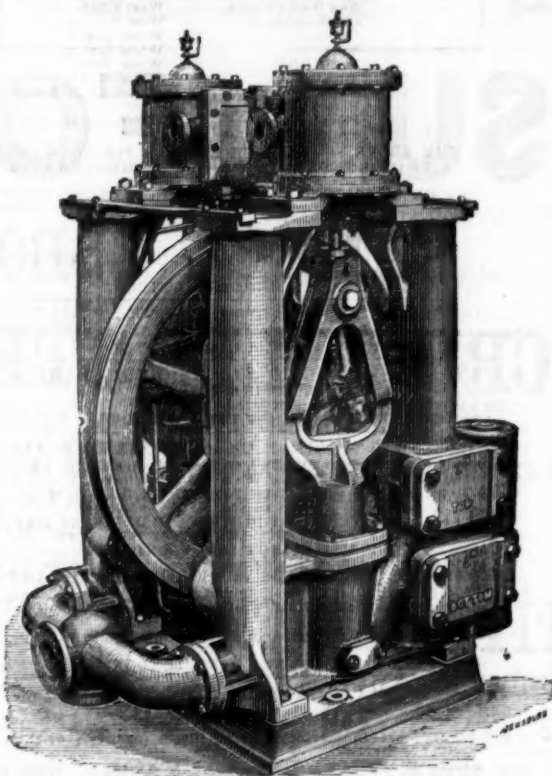
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